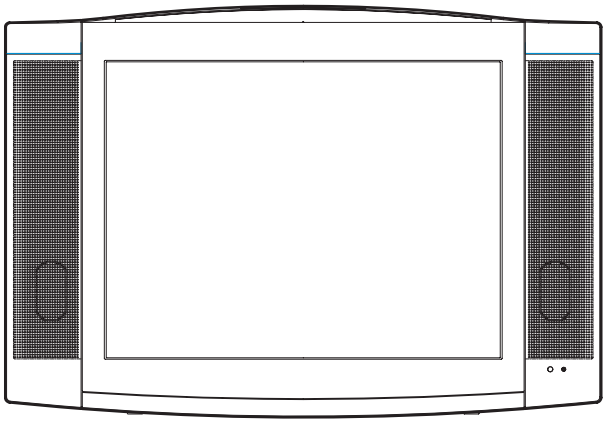
SYLVANIA

SERVICE MANUAL

This service manual shows only the differences between the model 6620LF4 and the original model EWL2005. All other information is described in the service manual of the model EWL2005.

20″ COLOR LCD TELEVISION

6620LF4



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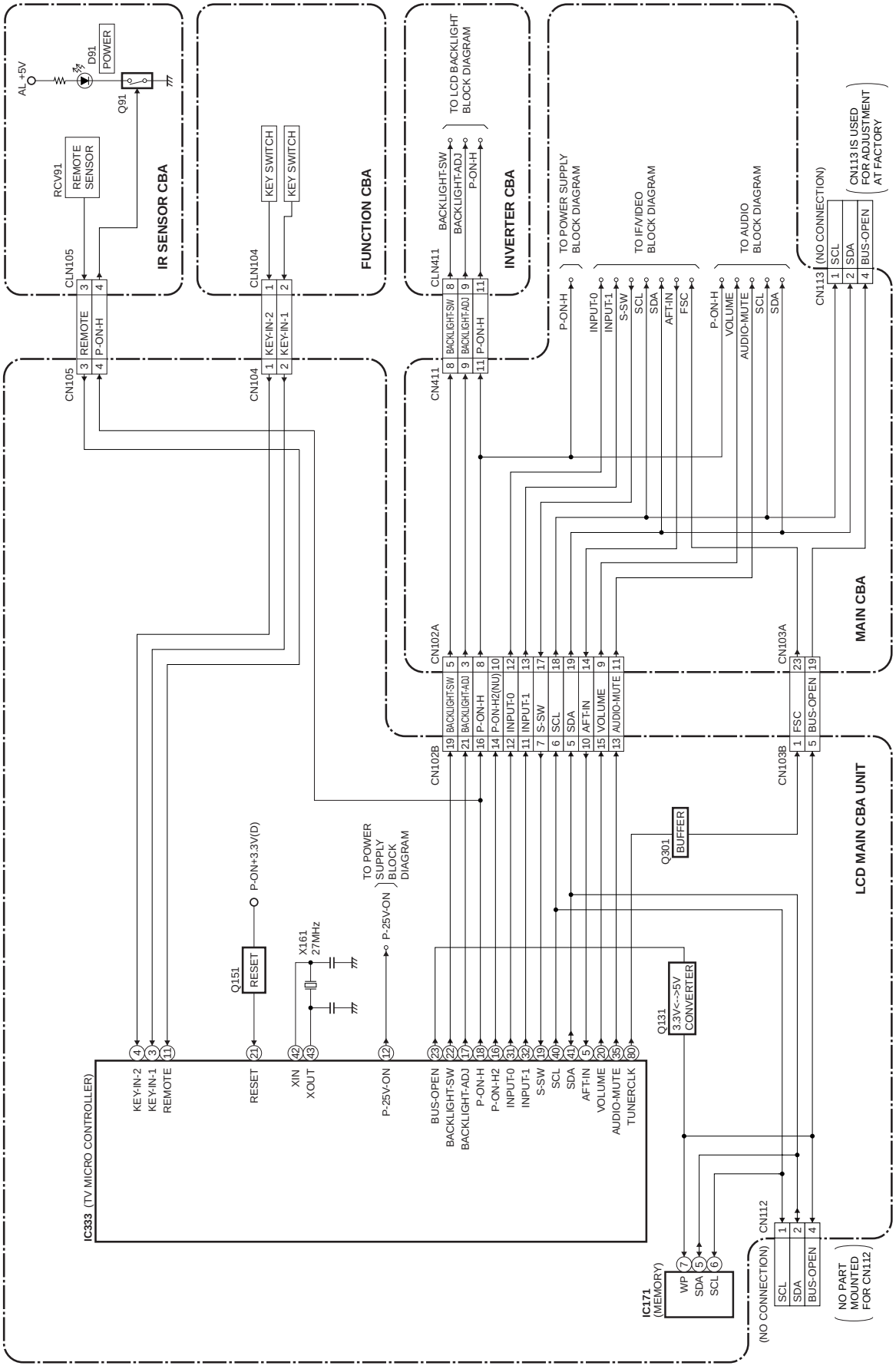
BLOCK DIAGRAMS

System Control Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms (K = 10^3, M = 10^6).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF (P = 10^{-6} μF).
5. All voltages are DC voltages unless otherwise specified.

Note of Capacitors:

ML --- Mylar Cap. PP --- Metallized Film Cap. SC --- Semiconductor Cap. L --- Low Leakage type

Temperature Characteristics of Capacitors are noted with the following:

B --- ±10% CH --- 0±60 ppm/°C CSL --- +350~-1000 ppm/°C

Tolerance of Capacitors are noted with the following:

Z --- +80~-20%

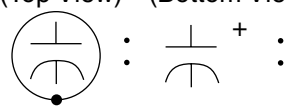
Note of Resistors:

CEM --- Cement Res. MTL --- Metal Res. F --- Fuse Res.

Capacitors and transistors are represented by the following symbols.

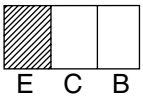
CBA Symbols

(Top View) (Bottom View)



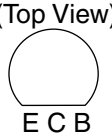
Electrolytic Capacitor

(Bottom View)



Transistor or Digital Transistor

(Top View)



NPN Transistor

(Top View)

PNP Transistor

(Top View)

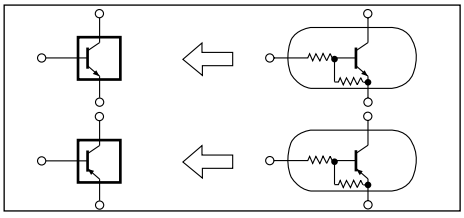
NPN Digital Transistor

(Top View)

PNP Digital Transistor

Schematic Diagram Symbols

Digital Transistor



LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE_A,_V FUSE.

ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE_A,_V.

2. CAUTION:

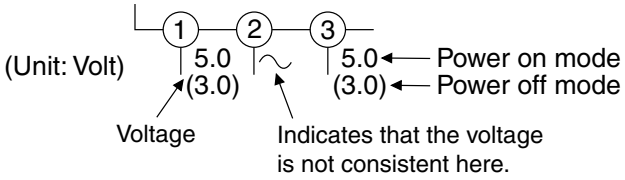
Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

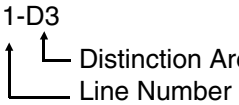
1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Voltage indications on the schematics are as shown below:

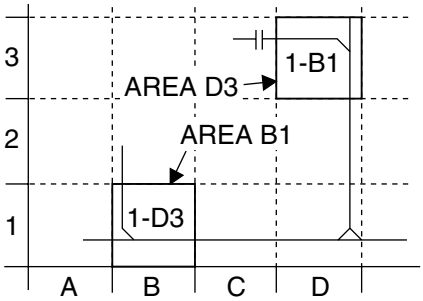
Plug the TV power cord into a standard AC outlet.:



5. How to read converged lines



Examples:
1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



6. Test Point Information

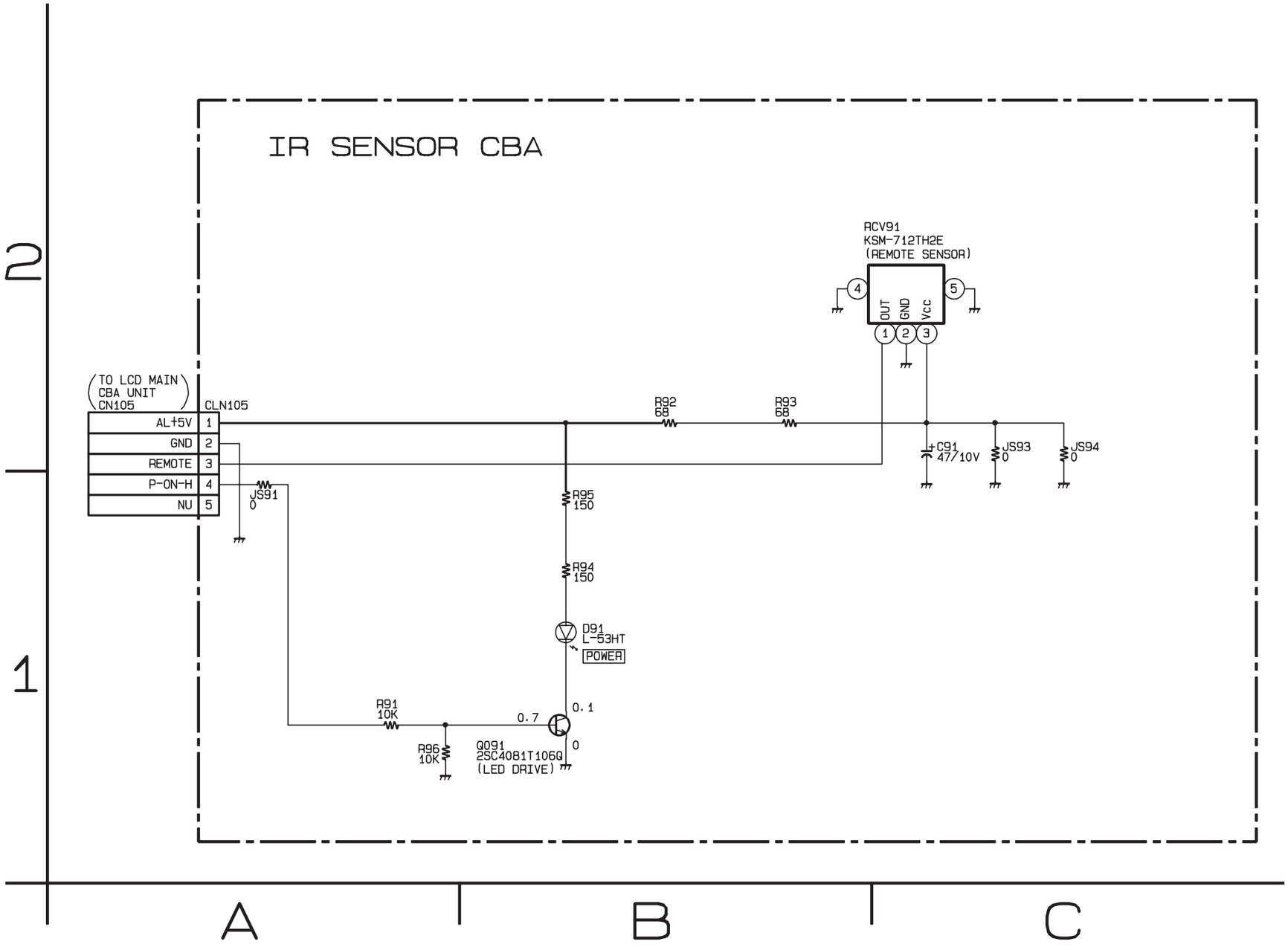
: Indicates a test point with a jumper wire across a hole in the PCB.

: Used to indicate a test point with a component lead on foil side.

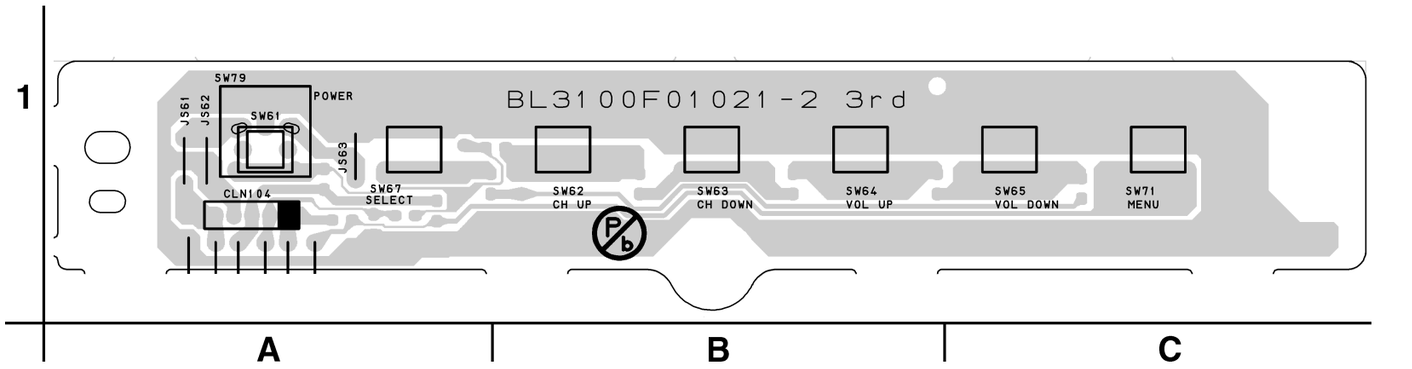
: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

IR Sensor Schematic Diagram

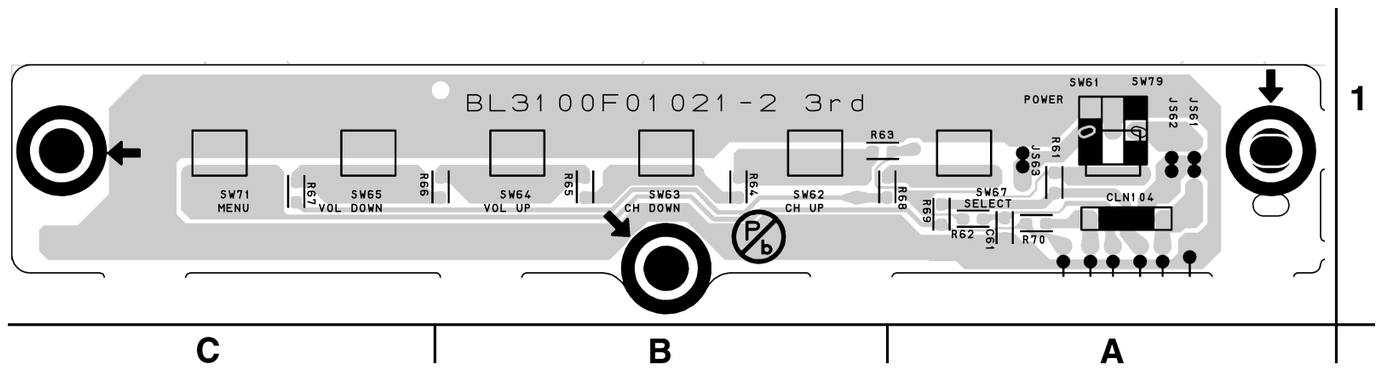


Function CBA Top View



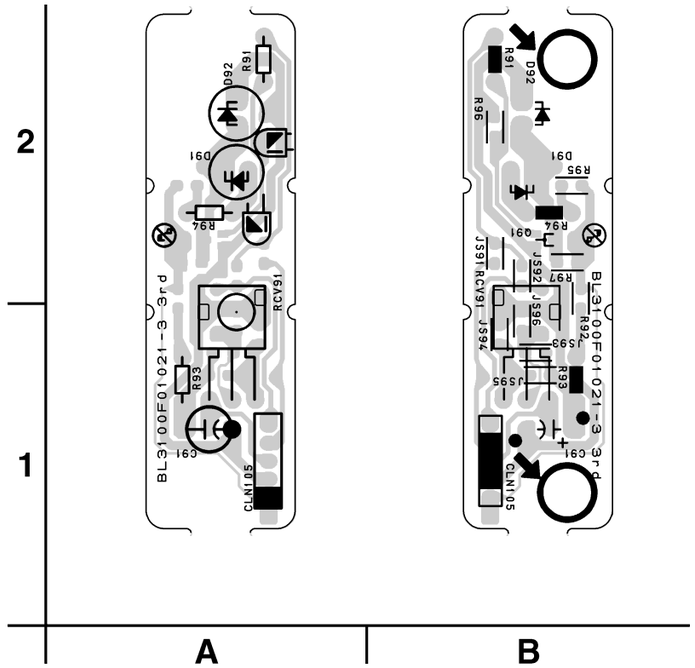
BL3100F01021-2

Function CBA Bottom View



BL3100F01021-2

IR Sensor CBA Top & Bottom View



BL3100F01021-3

Different parts from the original model (EWL2005)

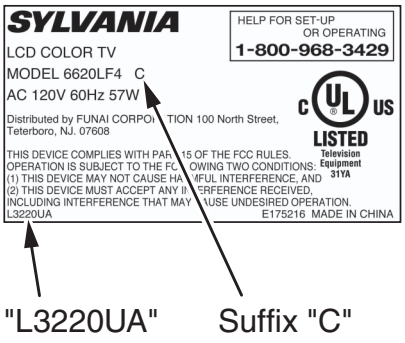
Ref. No.	Description	Part No.
MECHANICAL PARTS		
A1	FRONT CABINET L3200UA	1EM020185
A2	BRAND BADGE L0200UA~SYLVANIA~	0EM409019
A3	CONTROL PLATE L0301UB	1EM220019
A4	REAR CABINET L3200UA	1EM020138
A5	Not Used	
A6⚠	RATING LABEL L3200UA	----------
A7	FUNCTION KNOB L0301UB	1EM220005A
A8	REAR COVER L3207UH	1EM420953
A9	TILT STAND ASSEMBLY L0301UB	1EMN20039
A10	CONNECTOR CAP L3200UA	1EM420645
A11	SENSOR/LED LENS L0301UB	1EM220004
B1	SPEAKER HOLDER L0110UA	0EM407855C
B3	STAND HOLDER L0200UA	0EM301999B
B6	CLOTH(15X190XT 0.5) L0100JA	0EM407894
B8	Not Used	
B12	20V TILT STAND HOLDER L4200EA	1EM320145
B21	CLOTH(10X180XT0.5) L0336JG	0EM408827
B22	INSULATION PLATE L3207UH	1EM421108
B23	CAUTION LABEL L3207UH	----------
CLN801	SPEAKER WIRE ASSEMBLY 2P WIRE ASSEMBLY	WX1L3201-001
CLN802	SPEAKER WIRE ASSEMBLY 2P WIRE ASSEMBLY	WX1L3201-001
L7	Not Used	
L18	DOUBLE SEMS SCREW M4X12 + BLAK	FPK34120
SP801	SPEAKER S0407F10	DSD0807XQ002
SP802	SPEAKER S0407F10	DSD0807XQ002
S1	CARTON L3200UA	1EM420656
S2	STYROFOAM TOP L0301UB	1EM020018A
S3	STYROFOAM BOTTOM L0301UB	1EM020019A
S4	SET BAG L3207UH	1EM320295
S6	STYROFOAM STAND BOTTOM L0301UB	1EM020020A
X2⚠	OWNERS MANUAL L3200UA	1EMN20336
ELECTRICAL PARTS		
	LCD MAIN CBA & LIQUID CRYSTAL PANEL UNIT	1FSA10052
	MMA CBA (IR SENSOR CBA is not included.)	1ESA10860
	ANALOG INVERT PCB ASSEMBLY	1ESA10861
	FUNCTION CBA	----------
CLN104	5P-8P WIRE ASSEMBLY 5P-8P WIRE ASSEMBLY	WX1L3201-006
	IR SENSOR CBA	----------
C91	ELECTROLYTIC CAP. 47μF/ 10V M H7	CE1AMASSL470
D91	LED L-53HT	NP4Z000L53HT
CLN105	5P WIRE ASSEMBLY 5P WIRE ASSEMBLY	WX1L3201-004
Q91	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
R91	CARBON RES. 1/4W J 10kΩ	RCX4JATZ0103
R92	CHIP RES.(1608) 1/10W J 68Ω	RRXAJR5Z0680
R93	CARBON RES. 1/4W J 68Ω	RCX4JATZ0680
R94	CARBON RES. 1/4W J 150Ω	RCX4JATZ0151
R95	CHIP RES.(1608) 1/10W J 150Ω	RRXAJR5Z0151
R96	CHIP RES.(1608) 1/10W J 10kΩ	RRXAJR5Z0103
JS91	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
JS93	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
JS94	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
RCV91	PHOTO LINK MODULE KSM-712TH2E	USESJRSKK044

SYLVANIA

SERVICE MANUAL

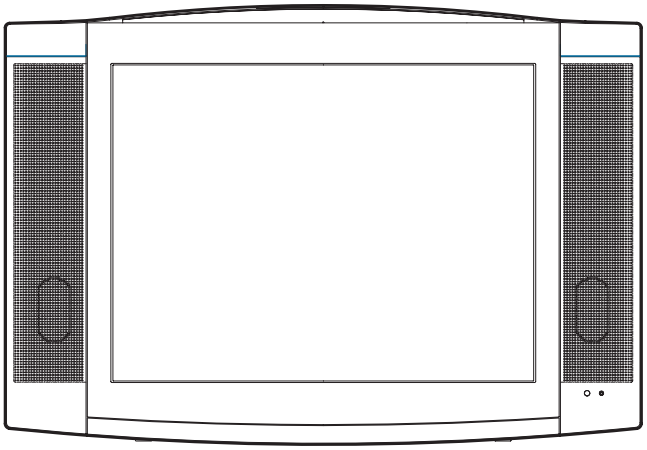
This service manual is for the 6620LF4 different LCD Module Assembly model, which is different from the previous 6620LF4 model.
For 6620LF4 different LCD Module Assembly model, an "C" or the letter (L3220UA) is printed on rating label on the back of the unit. Refer to the rating label illustration at right.

Rating Label


SYLVANIA
HELP FOR SET-UP OR OPERATING
1-800-968-3429
LCD COLOR TV
MODEL 6620LF4 C
AC 120V 60Hz 57W
Distributed by FUNAI CORPO TION 100 North Street, Teterboro, NJ. 07608
c UL us
LISTED
Television Equipment 31YA
THIS DEVICE COMPLIES WITH PAR 15 OF THE FCC RULES.
OPERATION IS SUBJECT TO THE FC OWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HA MFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY I ERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY AUSE UNDESIRED OPERATION.
L3220UA
E175216 MADE IN CHINA
"L3220UA"
Suffix "C"

20″ COLOR LCD TELEVISION

6620LF4



IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.

It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advice the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

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The LCD panel is manufactured to provide many years of useful life. Occasionally a few non active pixels may appear as a tiny spec of color. This is not to be considered a defect in the LCD screen.

SPECIFICATIONS

< TUNER >

ANT. Input ---------- 75 ohm Unbal., F type
Reference Level---------- 20 Vp-p (LCD Green Cathode)
Test Input Signal ---------- 400 Hz 30% modulation

Description	Condition	Unit	Nominal	Limit
1. Intermediate Freq.	Picture Sound	MHz MHz	45.75 41.25	--- ---
2. Color Killer Sens.	CH-2 CH-10 CH-55	dBμV dBμV dBμV	15 15 15	20 20 20
3. AFT Pull In Range (10 mV input)	---	MHz	±2.1	±0.7

< LCD PANEL >

Description	Condition	Unit	Nominal	Limit
1. Number of Pixels	Horizontal Vertical	pixels pixels	640 × 3 480	--- ---
2. Brightness		cd/m^2	500	---
3. Response Time	---	msec	16	---
4. Support Color	---	-	26 mil. (6 bit)	---
5. Viewing Angle	Horizontal Vertical	° °	-80 to 80 -65 to 70	--- ---

< VIDEO >

Description	Condition	Unit	Nominal	Limit
1. Over Scan	Horizontal Vertical	% %	7 7	--- ---
2. Color Temperature	--- x y	°K	9200 0.286 0.294	--- ±0.3 ±0.3
3. Resolution	Horizontal Vertical	line line	400 350	--- ---

< AUDIO >

All items are measured across 8 Ω load at speaker output terminal with L.P.F.

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power	10% THD: Lch/Rch	W	1.0/1.0	0.8/0.8
2. Audio Distortion	500mW: Lch/Rch	%	1.0/1.0	4.0/4.0
3. Audio Freq. Response	−3dB: Lch −3dB: Rch	Hz Hz	50 to 12 k 50 to 12 k	--- ---

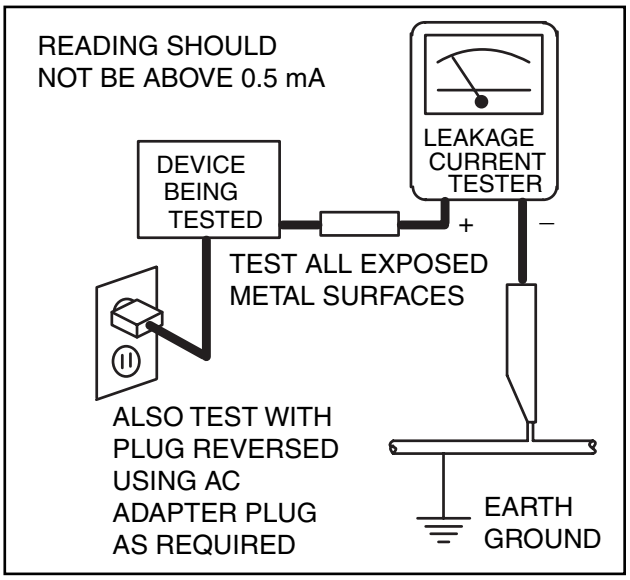
Note: Nominal specifications represent the design specifications. All units should be able to approximate these. Some will exceed and some may drop slightly below these specifications. Limit specifications represent the absolute worst condition that still might be considered acceptable. In no case should a unit fail to meet limit specifications.

IMPORTANT SAFETY PRECAUTIONS

Prior to shipment from the factory, our products are strictly inspected for recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Safety Precautions for LCD TV Circuit

1. **Before returning an instrument to the customer,** always make a safety check of the entire instrument, including, but not limited to, the following items:
   - **a.** Be sure that no built-in protective devices are defective and have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**
   - **b.** Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) spacing between the Liquid Crystal Panel and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.
   - **c. Antenna Cold Check -** With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.
   - **d. Leakage Current Hot Check -** With the instrument completely reassembled, plug the AC line cord directly into a 120 V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal water pipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle brackets, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milli-ampere. Reverse the instrument power cord plug in the outlet and repeat the test.



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the Liquid Crystal Panel.

3. **Design Alteration Warning -** Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and may make you, the servicer, responsible for personal injury or property damage resulting therefrom.
4. **Hot Chassis Warning -**
   - **a.** Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and maybe safety-serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter, measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground.
   - **b.** Some TV receiver chassis normally have 85V AC(RMS) between chassis and earth ground regardless of the AC plug polarity. This chassis can be safety-serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection.
   - **c.** Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulation material that must not be defeated or altered.
5. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges, b. near thermally hot parts-be sure that leads and components do not touch thermally hot parts, c. the AC supply, d. high voltage, and, e. antenna wiring. Always inspect in all areas for pinched, out of place, or frayed wiring. Check AC power cord for damage.
6. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
7. **Product Safety Notice -** Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc.. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The product's safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are strictly inspected to confirm they comply with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety.
Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:
1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:
1) Insulation Tape
2) PVC tubing
3) Spacers
4) Insulators for transistors.

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.)

G. Check that replaced wires do not contact sharp edged or pointed parts.

H. When a power cord has been replaced, check that 5~6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. Crimp type wire connector
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.
Replacement procedure
1) Remove the old connector by cutting the wires at a point close to the connector.
Important: Do not re-use a connector (discard it).
2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
4) Use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC supply outlet.

M. When installing parts or assembling the cabinet parts, be sure to use the proper screws and tighten certainly.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1: Ratings for selected area

AC Line Voltage	Region	Clearance Distance (d), (d')
110 to 130 V	U.S.A. or Canada	≥ 3.2 mm (0.126 inches)

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

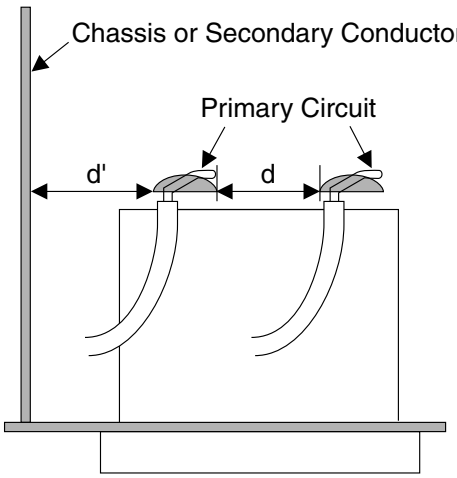


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method: (Power ON)

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig. 2 and following table.

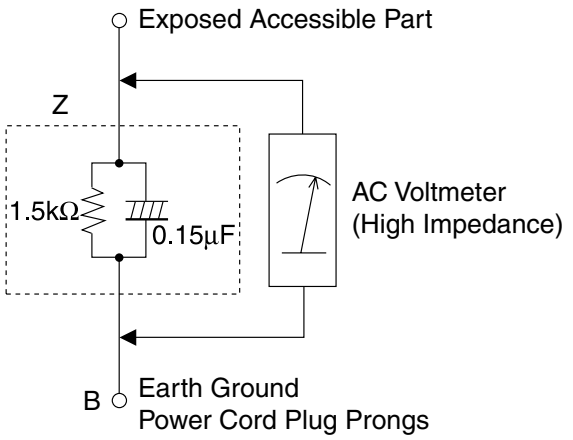


Fig. 2

Table 2: Leakage current ratings for selected areas

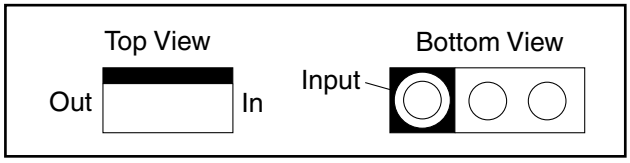
AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
110 to 130 V	U.S.A. or Canada	0.15 μF CAP. & 1.5 kΩ RES. Connected in parallel	i ≤ 0.5 mA rms	Exposed accessible parts

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

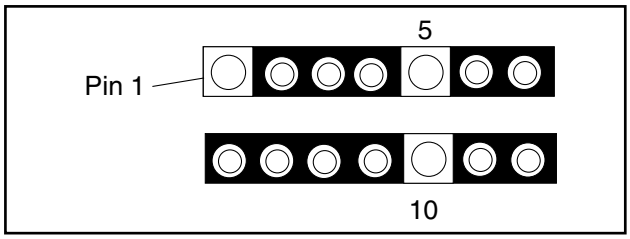
STANDARD NOTES FOR SERVICING

Circuit Board Indications

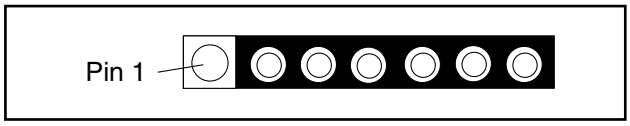
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

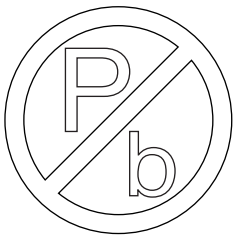


3. The 1st pin of every male connector is indicated as shown.



Pb (Lead) Free Solder

Pb free mark will be found on PCBs which use Pb free solder. (Refer to figure.) For PCBs with Pb free mark, be sure to use Pb free solder. For PCBs without Pb free mark, use standard solder.



Pb free mark

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

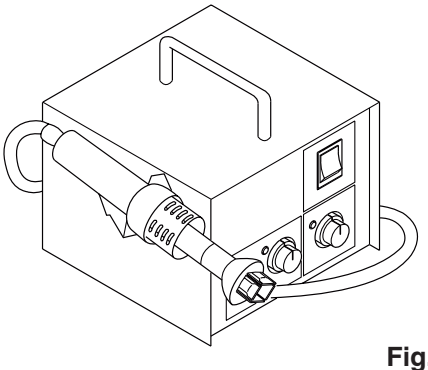


Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

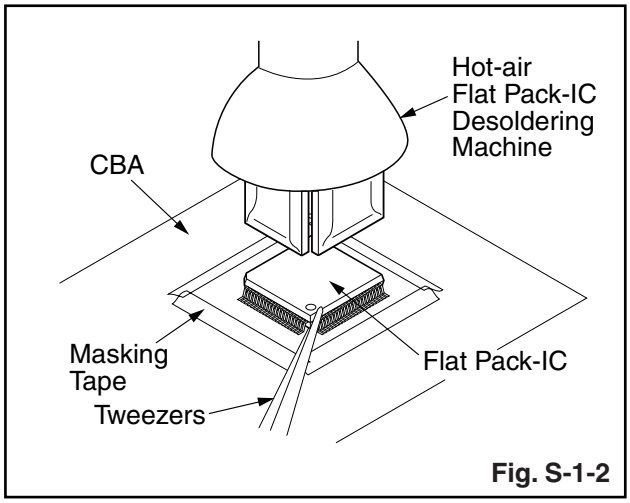


Fig. S-1-2

With Soldering Iron:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

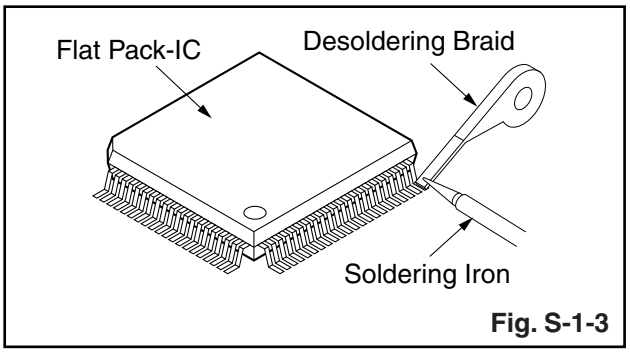


Fig. S-1-3

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

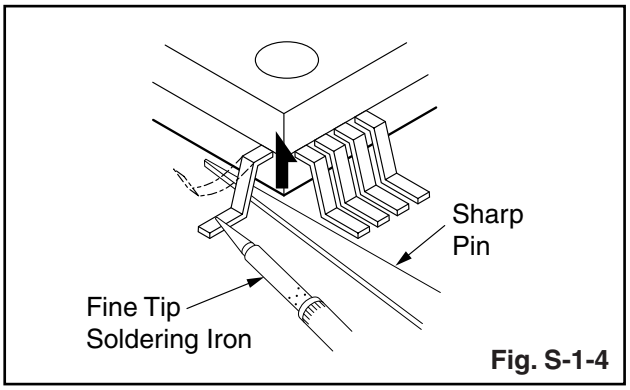


Fig. S-1-4

3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

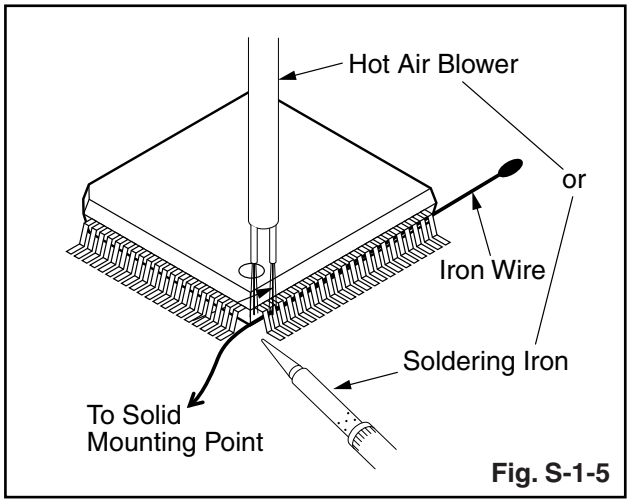


Fig. S-1-5

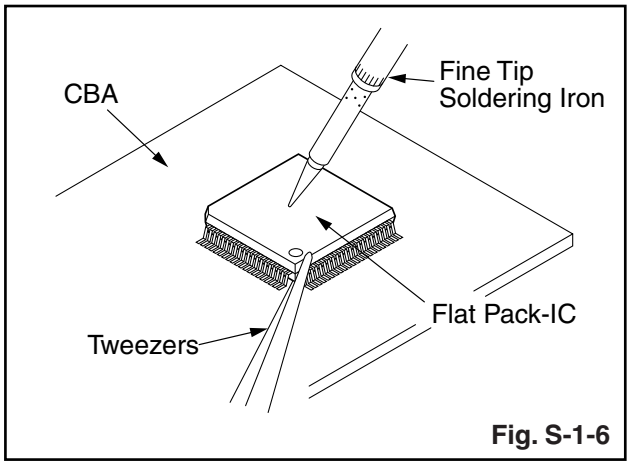


Fig. S-1-6

2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

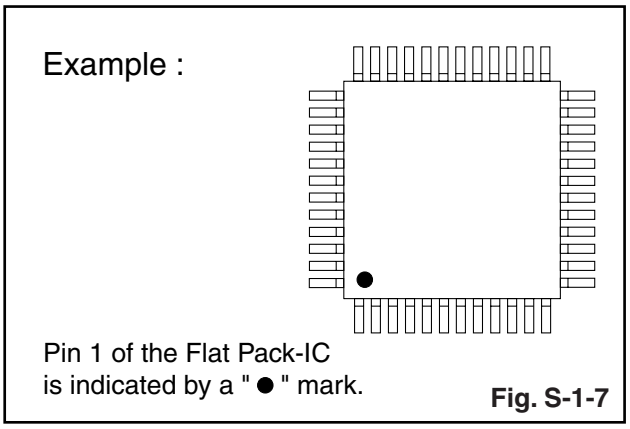


Fig. S-1-7

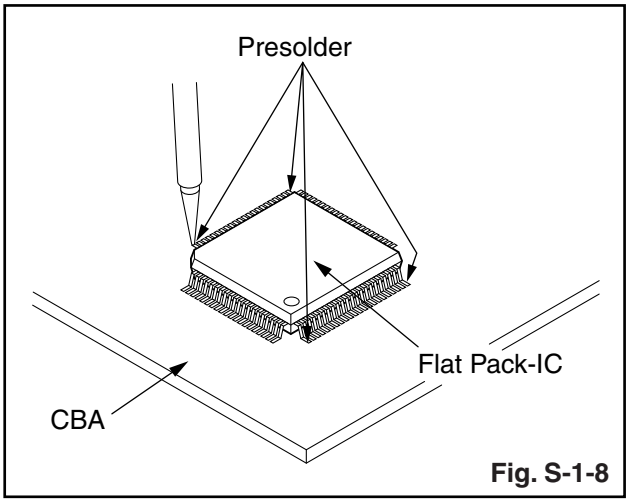


Fig. S-1-8

Instructions for Handling Semi-conductors

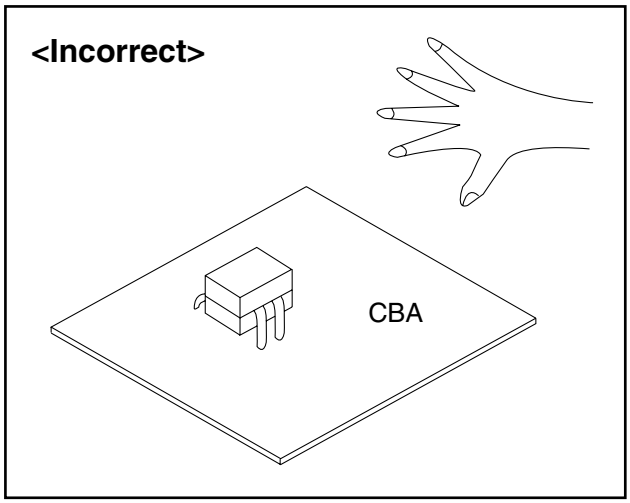
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

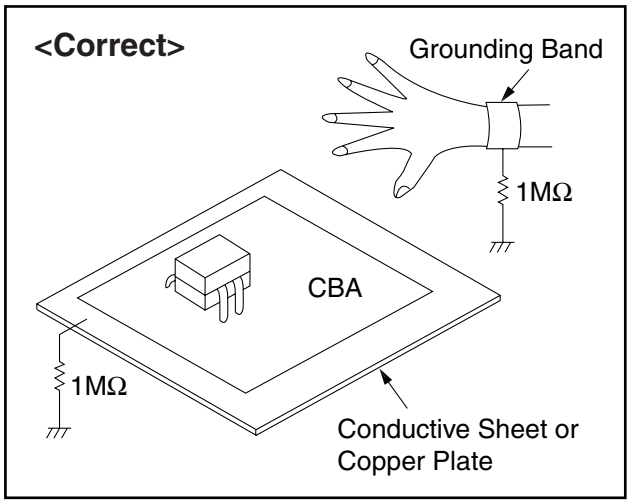
1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.

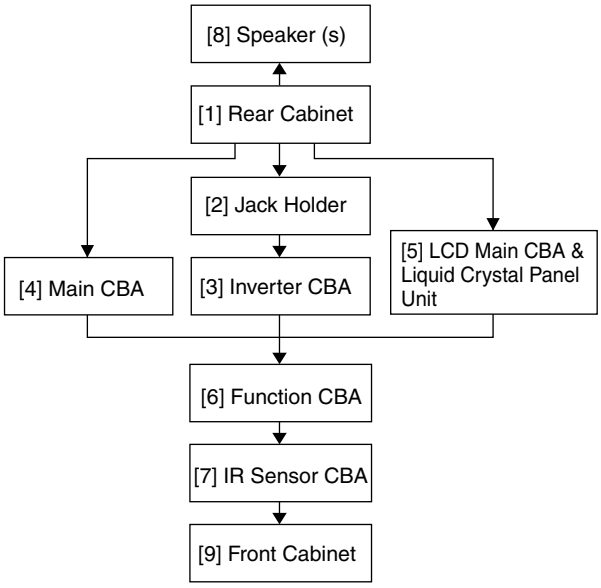




CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps for the cabinet parts, and the CBA in order to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route and dress the cables as they were.



2. Disassembly Method

Step/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Unclamp/ Desolder	Note
[1]	Rear Cabinet	D1	11(S-1), 2(S-2),	---
[2]	Jack Holder	D2	3(S-3), (S-4)	---
[3]	Inverter CBA	D2 D3	5(S-5), *CN450, *CN460, *CN490, *CLN411	---
[4]	Main CBA	D2 D3	9(S-6), *CN101A, *CN102A, *CN103A, *CN801, *CN802	---
[5]	LCD Main CBA & Liquid Crystal Panel Unit	D2 D3	13(S-7), *CN104, CN105	---
[6]	Function CBA	D2 D3	3(S-8)	---
[7]	IR Sensor CBA	D2 D3	2(S-9)	---
[8]	Speaker (s)	D2 D3	4(S-10)	---
[9]	Front Cabinet	D2	----------	---
		↓ (3)	↓ (4)	↓ (5)

Note:

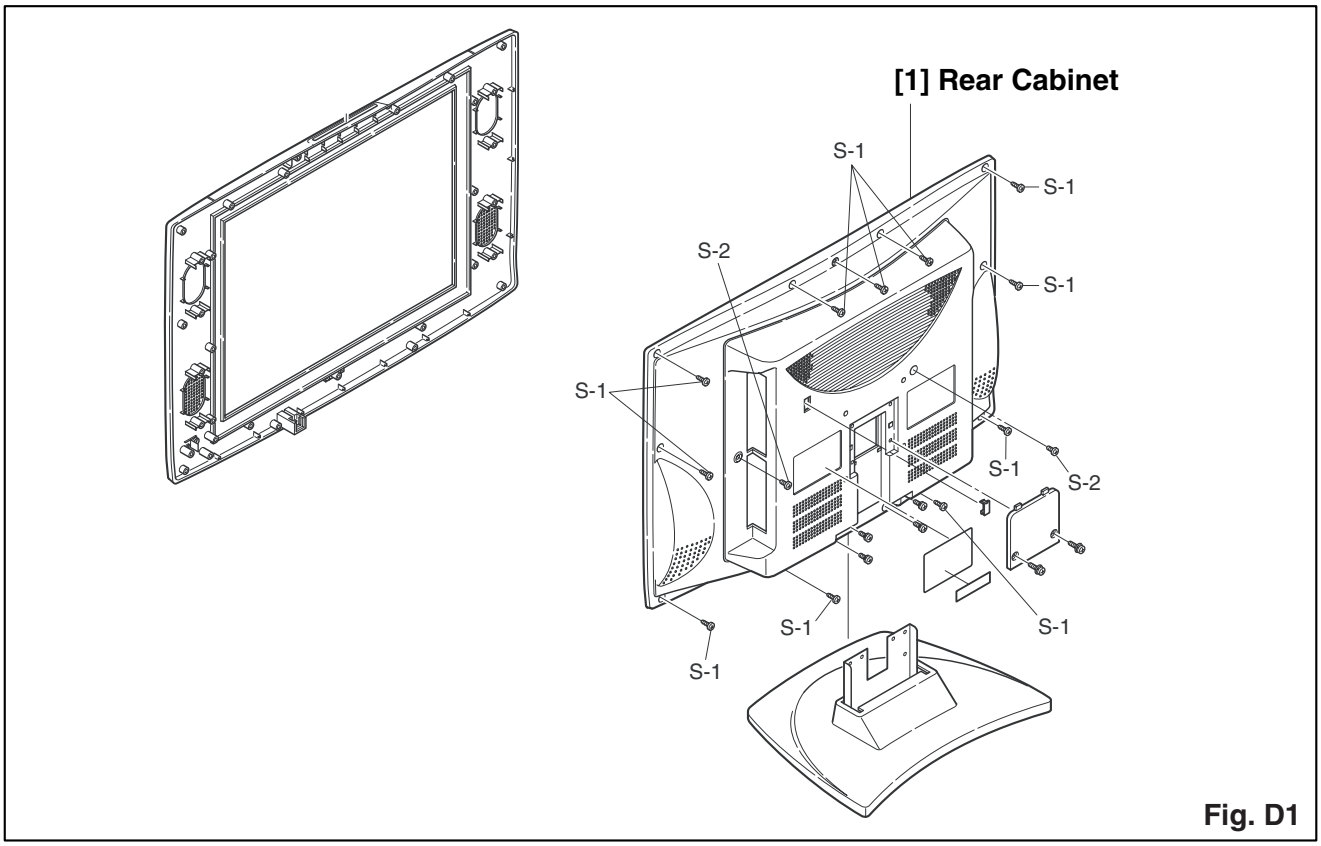
(1) Order of steps in procedure. When reassembling, follow the steps in reverse order. These numbers are also used as the Identification (location) No. of parts in figures.

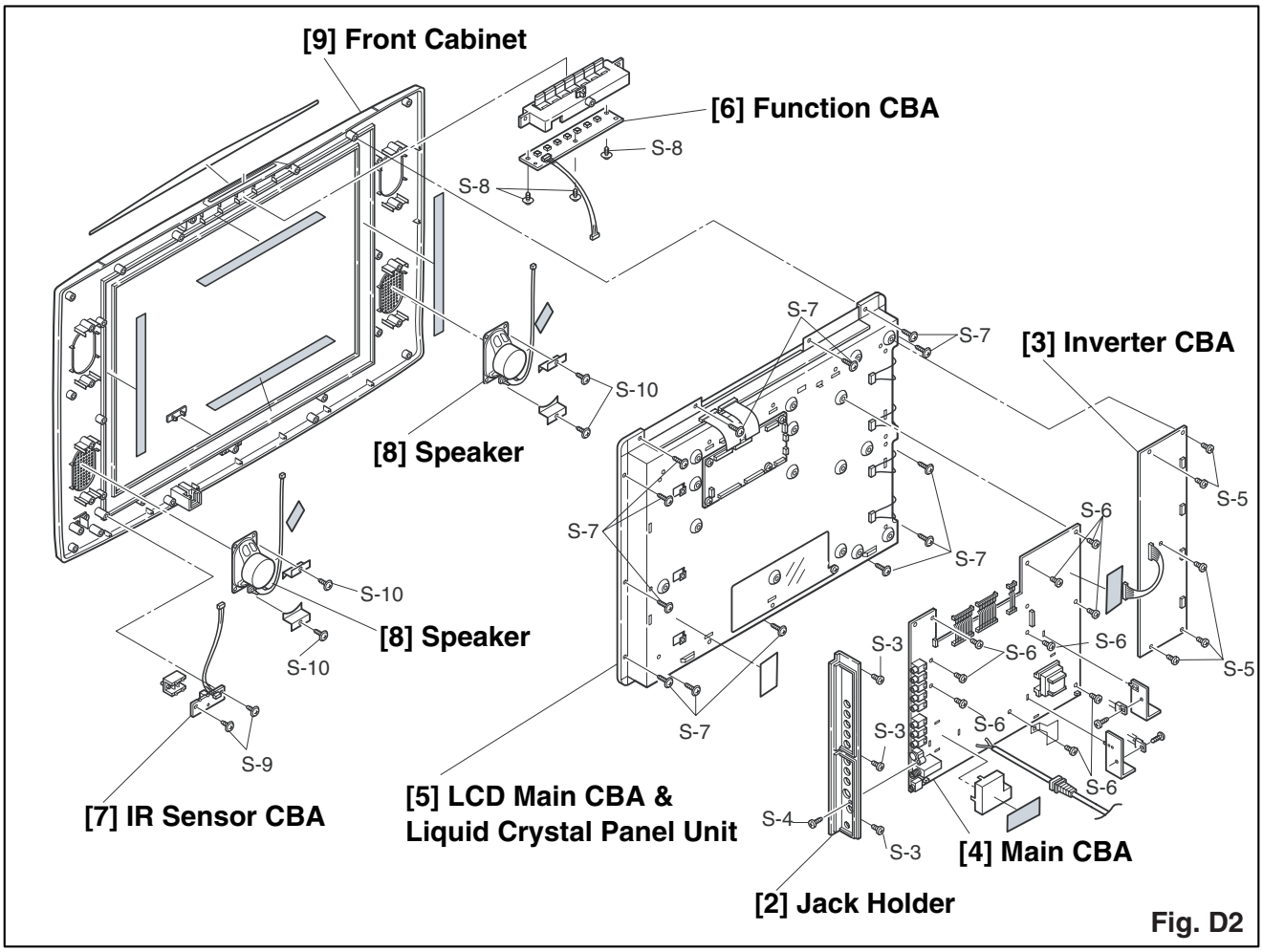
(2) Parts to be removed or installed.

(3) Fig. No. showing procedure of part location

(4) Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P = Spring, L = Locking Tab, S = Screw,
CN = Connector
* = Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(S-2) = two Screws (S-2),
2(L-2) = two Locking Tabs (L-2)

(5) Refer to the following "Reference Notes in the Table."


[1] Rear Cabinet
S-1
S-2
Fig. D1


[9] Front Cabinet
[6] Function CBA
S-8
[8] Speaker
S-10
[3] Inverter CBA
S-7
S-5
S-6
[8] Speaker
S-10
S-9
[7] IR Sensor CBA
[5] LCD Main CBA &
Liquid Crystal Panel Unit
S-3
S-4
[4] Main CBA
[2] Jack Holder
Fig. D2

TV Cable Wiring Diagram

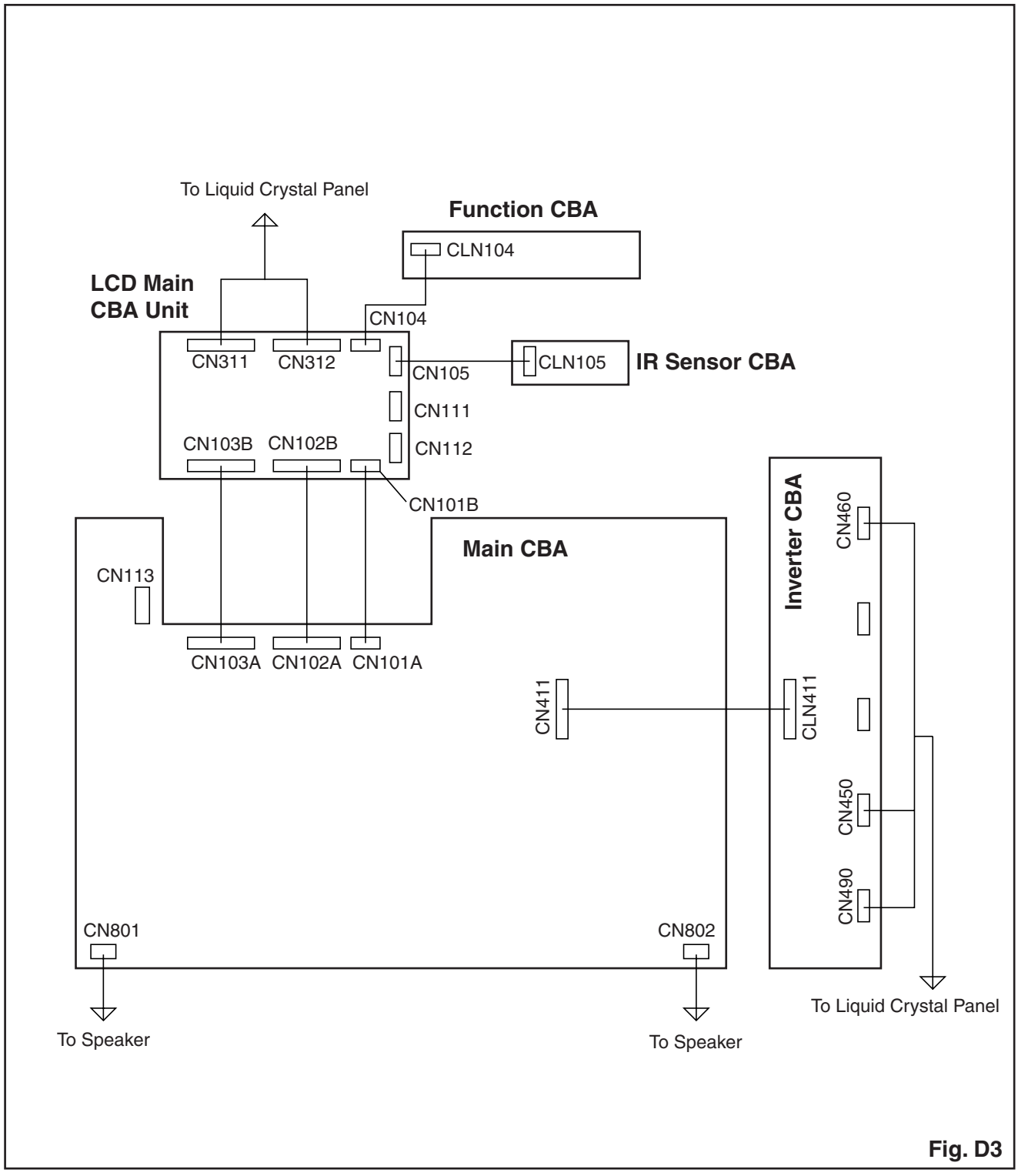


Fig. D3

ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note: "CBA" is abbreviation for "Circuit Board Assembly."

Note: Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed.
Also, do not attempt these adjustments unless the proper equipment is available.

Test Equipment Required

1. DC Voltmeter
2. NTSC Pattern Generator (Color Bar W/White Window, Red Color, Dot Pattern, Gray Scale, Monoscope, Multi-Burst)
3. Remote control unit: Part No. N0105UD or N0127UD
4. Color Analyzer

How to make Service remote control unit:

1. Prepare normal remote control unit.
(Part No. N0105UD or N0127UD)
Remove 3 Screws from the back lid. (Fig. 1-1)

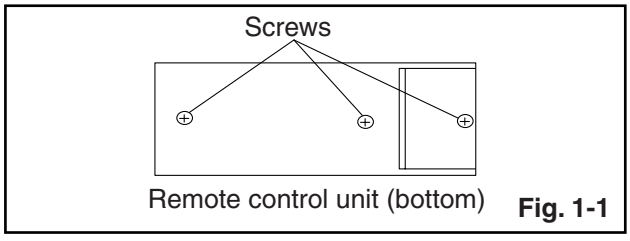


Fig. 1-1

2. Added J1 (Jumper Wire) to the remote control CBA. (Fig. 1-2)

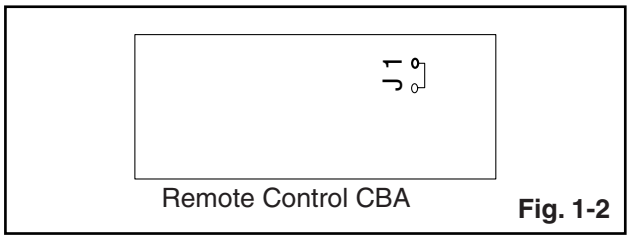


Fig. 1-2

How to set up the service mode:

Service mode:

1. Use the service remote control unit.
2. Turn the power on. (Use main power on the TV unit.)
3. Press [SLEEP] button on the service remote control unit. Version of micro computer will be displayed on the LCD or display. (Ex: 0004FP-0.47)

1. Initial Setting

General: Enter the Service mode. (See page 5-1.)

Set the each initial data as shown on table 1 below.

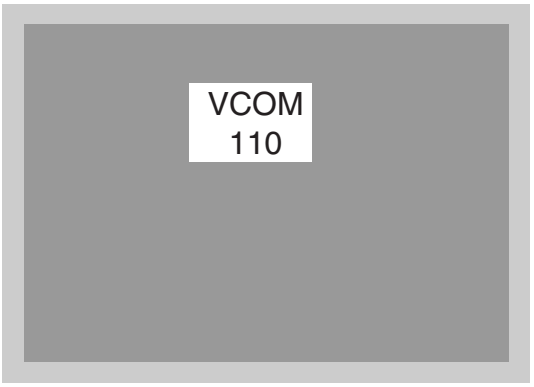
Table 1: Initial Data

Item	Button (on the service remote control)	Data Value
BRT	[MENU] → [1]	117
CNT		135
CLR-R		69
CLR-B		69
TNT		128
V-TNT		128
SHR		35
S-BRT	[MENU] → [2]	117
S-CNT		135
S-CLR-R		69
S-CLR-B		69
S-TNT		128
S-SHR		35
C-BRT	[MENU] → [3]	121
C-CNT		139
C-CLR-R		75
C-CLR-B		75
C-TNT		128
C-SHR		35

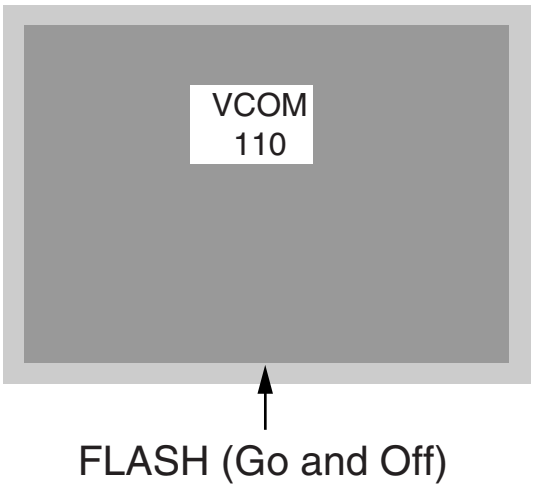
Item	Button (on the service remote control)	Data Value
D2-BRT	[MENU] → [5]	132
D2-CNT		140
D2-CLR-R		77
D2-CLR-B		77
D2-TNT		128
D2-SHR		35
D3-BRT	[MENU] → [6]	117
D3-CNT		139
D3-CLR-R		76
D3-CLR-B		76
D3-TNT		128
D3-SHR		28
COR(C/D1)	[VOL ▼] → [1]	128
C-COR(C/D2)		128
COB(C/D1)	[VOL ▼] → [3]	129
C-COB(C/D2)		136
DR(C/D1)	[VOL ▼] → [4]	176
C-DR(C/D2)		176
DB(C/D1)	[VOL ▼] → [6]	136
C-DB(C/D2)		136

2. Flicker Adjustment

1. Enter the Service mode. (See page 5-1.)
2. Press [2] button on the remote control unit. The following screen appears.



3. If Flicker Adjustment is not fit, the screen become the following.



4. Press [CH ▲ / ▼] buttons on the remote control unit so that flash stops.

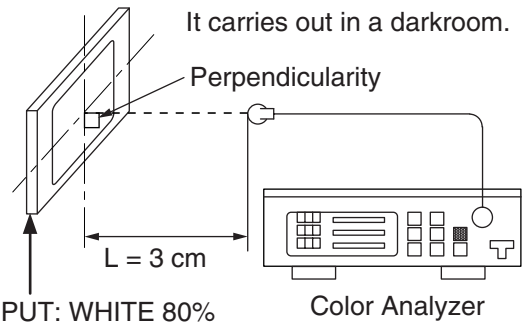
The following adjustment normally are not attempted in the field. Only when replacing the LCD Panel then adjust as a preparation.

3. White Balance Adjustment

Purpose: To mix red, green and blue beams correctly for pure white.

Symptom of Misadjustment: White becomes bluish or reddish.

Test Point	Adj. Point	Mode	Input
Screen	VOL. ▼ buttons	**[RF/VIDEO1]** C/D1 **[VIDEO2]** C/D2	White Purity (APL 80%) or (APL 13%)
M. EQ.		Spec.	
Pattern Generator, Color analyzer		x: 0.256 to 0.316, y: 0.264 to 0.324	
Figure			



Note: Use service remote control unit

1. Operate the unit for more than 20 minutes.
2. Input the White Purity (APL 80% or APL 13%).
3. Set the color analyzer to the CHROMA mode and bring the optical receptor to the center on the LCD-Panel surface after zero point calibration as shown above.
   Note: The optical receptor must be set perpendicularly to the LCD Panel surface.
4. **[RF/VIDEO1]**
   Enter the Service mode. Press "VOL ▼" button on the remote control unit and select "C/D/S-1" mode.
   [VIDEO2]
   Enter the Service mode. Press "VOL ▼" button on the remote control unit and select "C/D/S-2" mode.
5. **[RF/VIDEO1]**
   When "x" value and "y" value are not within specification, adjust "DB (C/D1)" or "DR (C/D1)". Refer to "1. Initial Setting."
   Note: "DB(C/D1)" or "DR(C/D1)" must be adjusted within ±0.01.
   [VIDEO2]
   When "x" value and "y" value are not within specification, adjust "DB(C/D2)" or "DR(C/D2)". Refer to "1. Initial Setting."
   Note: "DB(C/D2)" or "DR(C/D2)" must be adjusted within ±0.01.
6. Turn the power off and on again. (Main power button on the TV unit.)

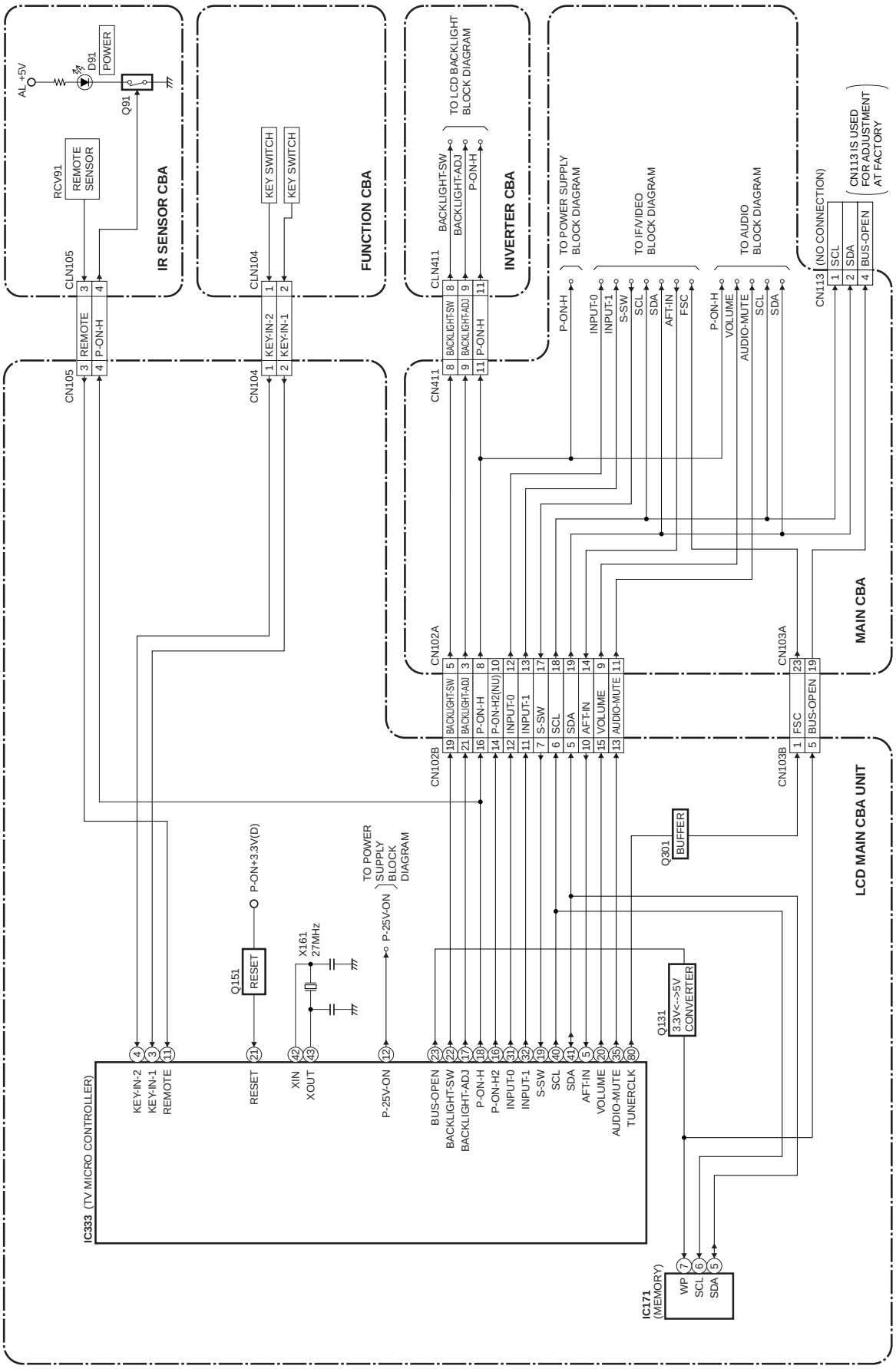
HOW TO INITIALIZE THE LCD TELEVISION

How to initialize the LCD television:

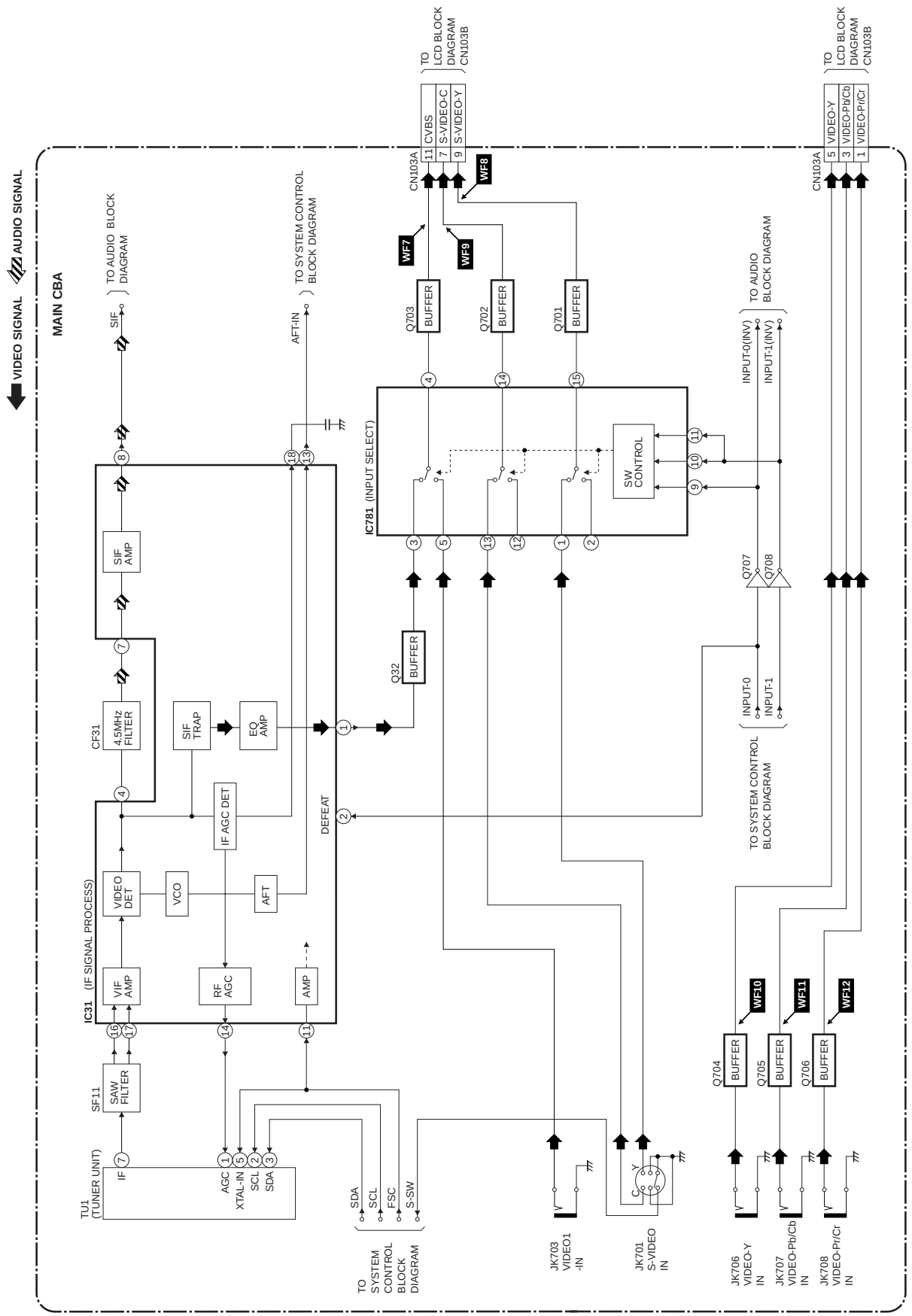
1. Turn the power on. (Use main power on the TV unit.)
2. To enter the service mode, press [POWER], [2], [7], [1], and [MUTE] buttons on the remote control unit in that order within 5 seconds.
   - To cancel the service mode, press [POWER] button on the remote control.
3. To initialize the LCD television, press “DISPLAY” button on the remote control unit.
4. Confirm "FF" indication on the upper right of the screen.

BLOCK DIAGRAMS

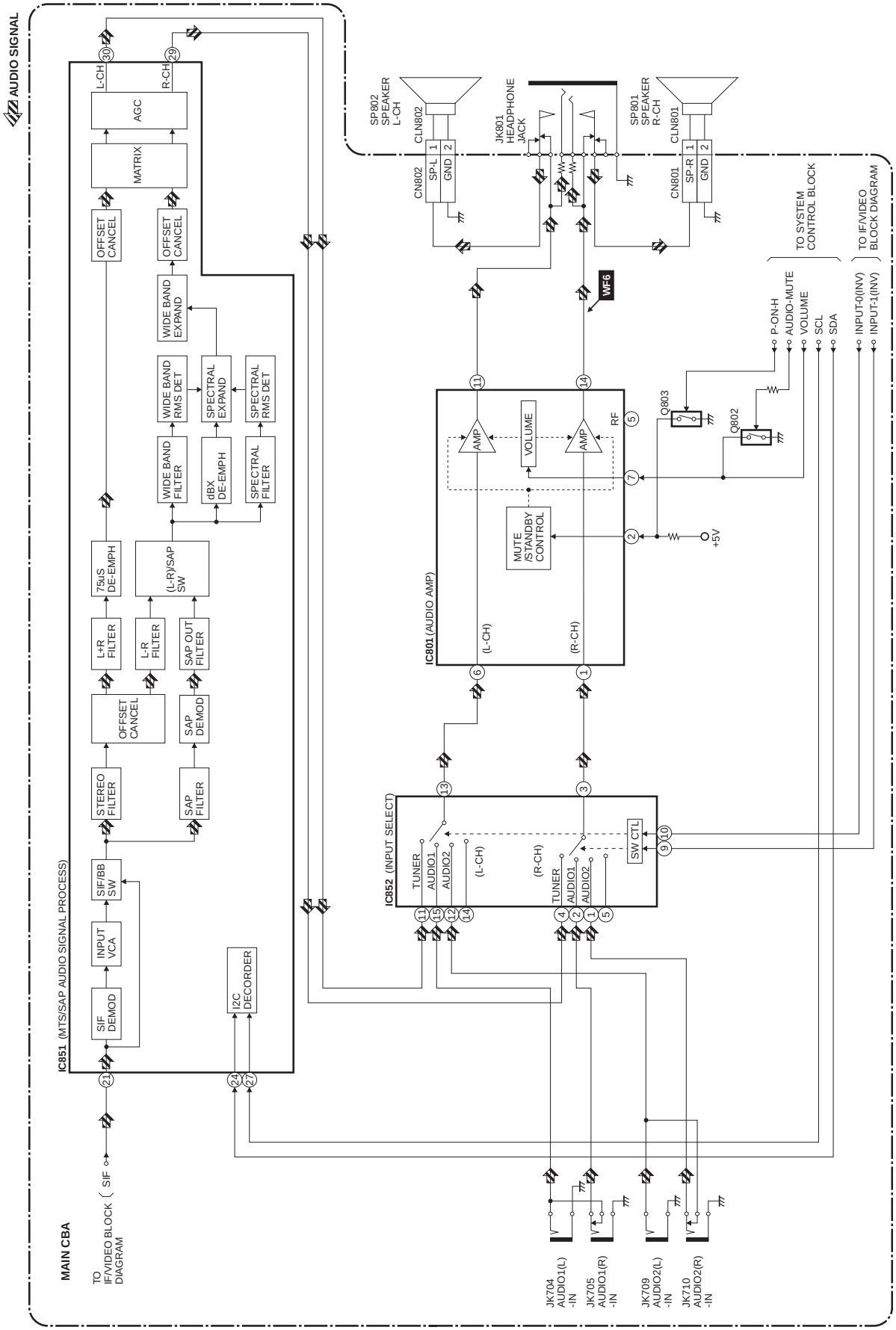
System Control Block Diagram



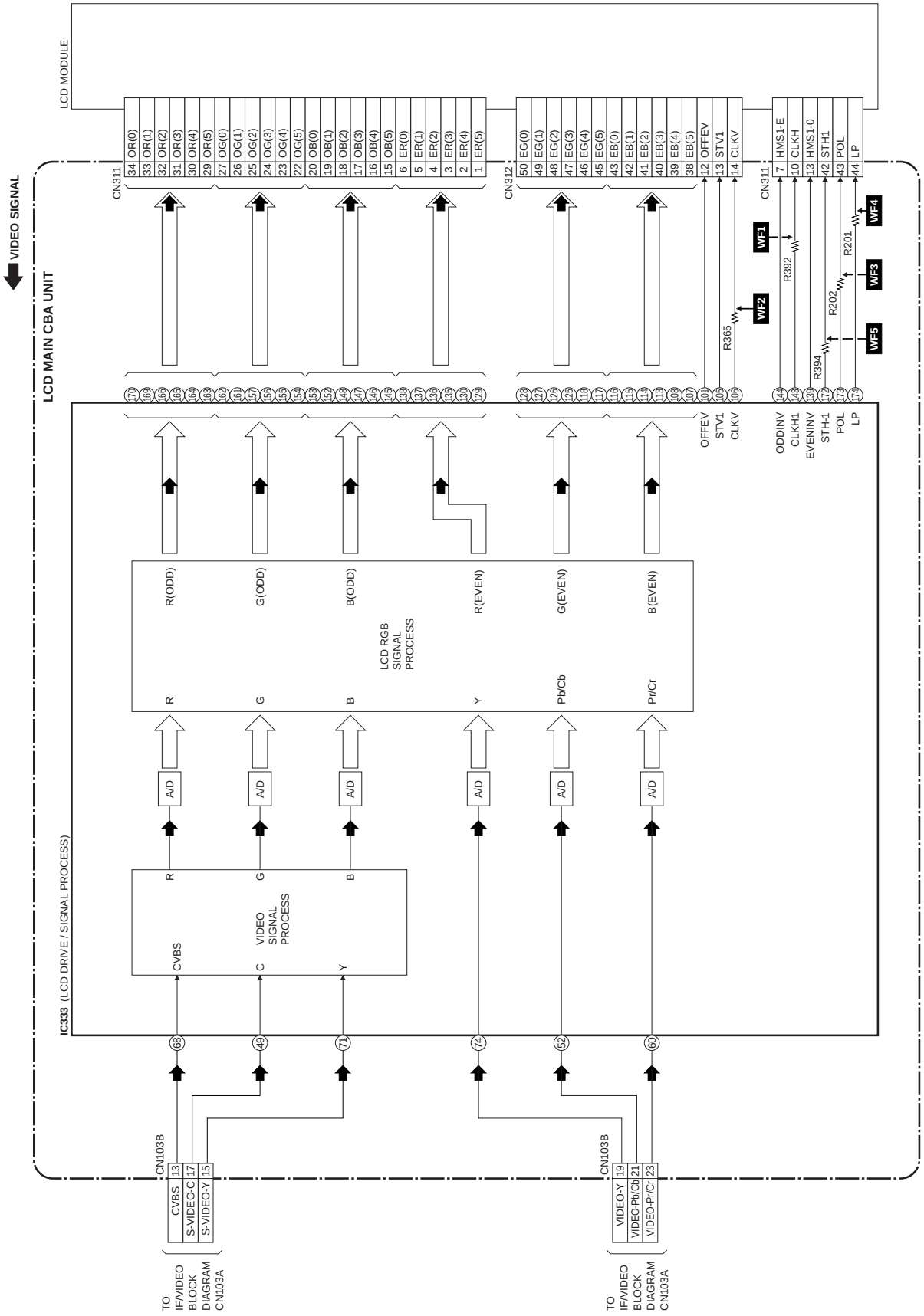
IF/Video Block Diagram



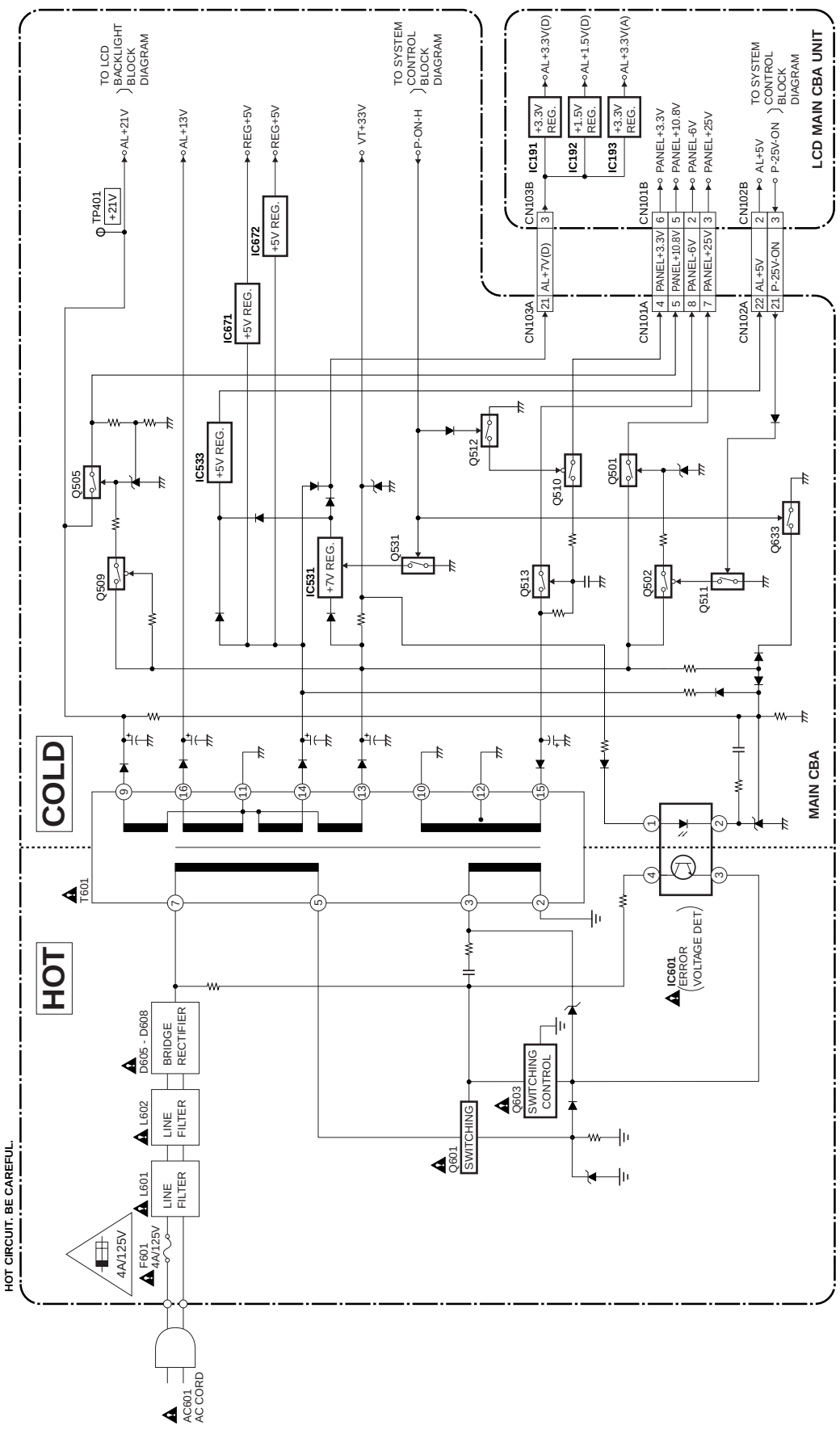
Audio Block Diagram



LCD Block Diagram



Power Supply Block Diagram



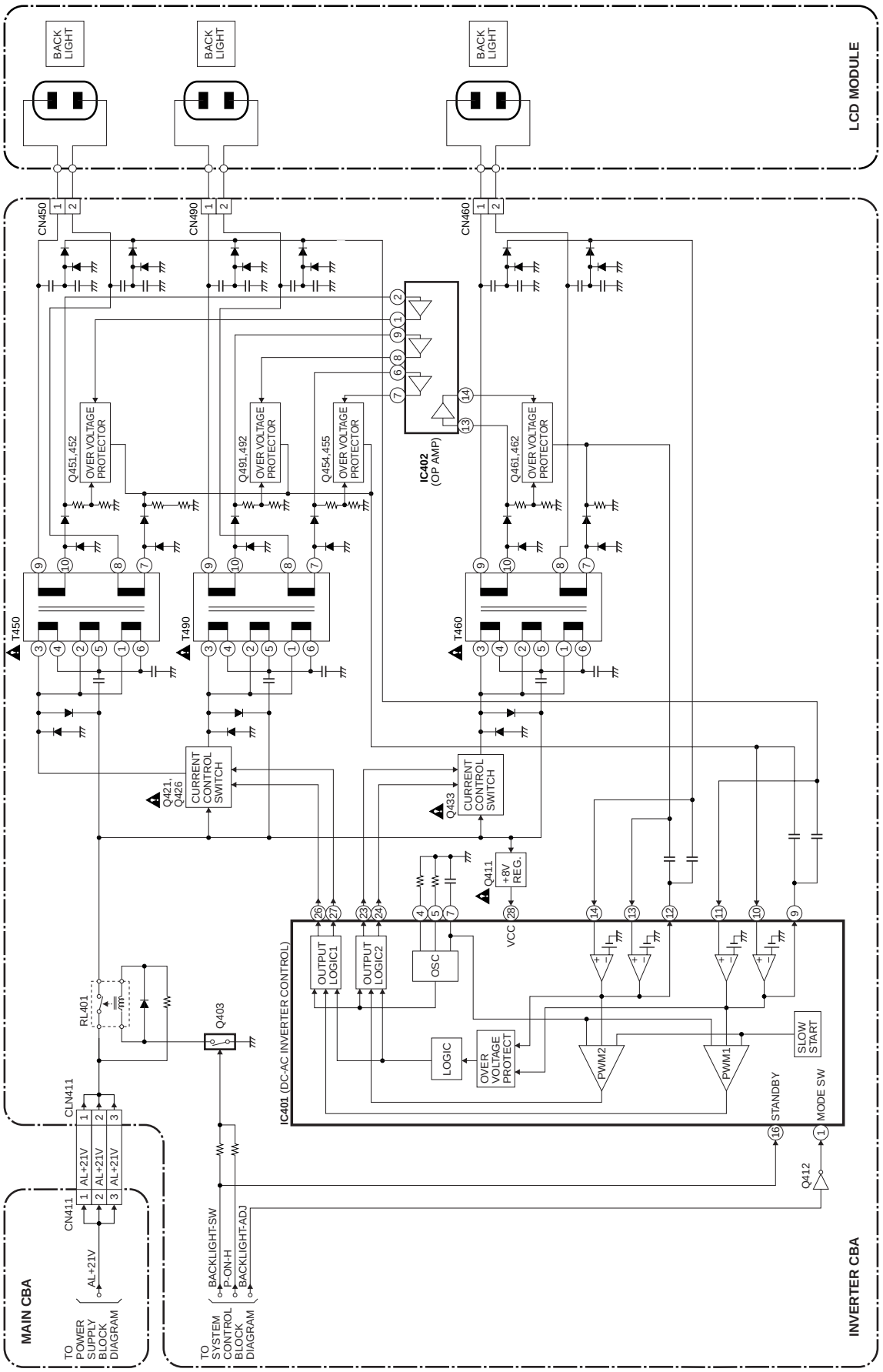
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

4A/125V

CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 125V.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

LCD Backlight Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms (K = 10^3, M = 10^6).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF (P = 10^{-6} μF).
5. All voltages are DC voltages unless otherwise specified.

Note of Capacitors:

ML --- Mylar Cap. PP --- Metallized Film Cap. SC --- Semiconductor Cap. L --- Low Leakage type

Temperature Characteristics of Capacitors are noted with the following:

B --- ±10% CH --- 0±60 ppm/°C CSL --- +350~-1000 ppm/°C

Tolerance of Capacitors are noted with the following:

Z --- +80~-20%

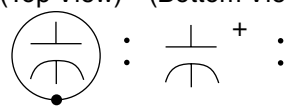
Note of Resistors:

CEM --- Cement Res. MTL --- Metal Res. F --- Fuse Res.

Capacitors and transistors are represented by the following symbols.

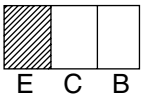
CBA Symbols

(Top View) (Bottom View)



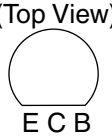
Electrolytic Capacitor

(Bottom View)



Transistor or Digital Transistor

(Top View)



NPN Transistor

(Top View)

PNP Transistor

(Top View)

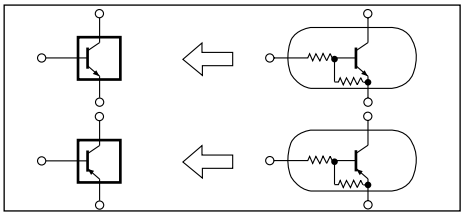
NPN Digital Transistor

(Top View)

PNP Digital Transistor

Schematic Diagram Symbols

Digital Transistor



LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE_A,_V FUSE.

ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE_A,_V.

2. CAUTION:

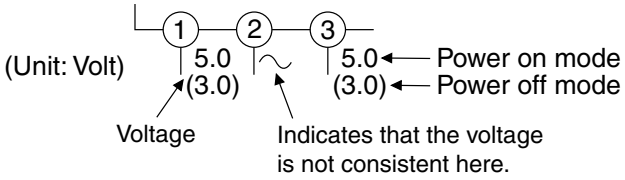
Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

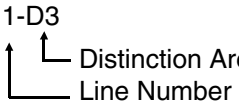
1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Voltage indications on the schematics are as shown below:

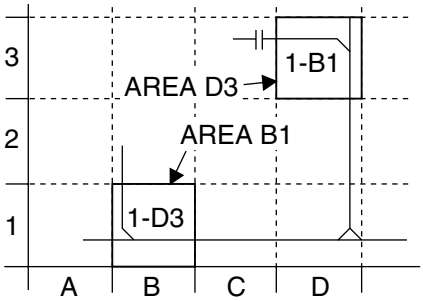
Plug the TV power cord into a standard AC outlet.:



5. How to read converged lines



Examples:
1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



6. Test Point Information

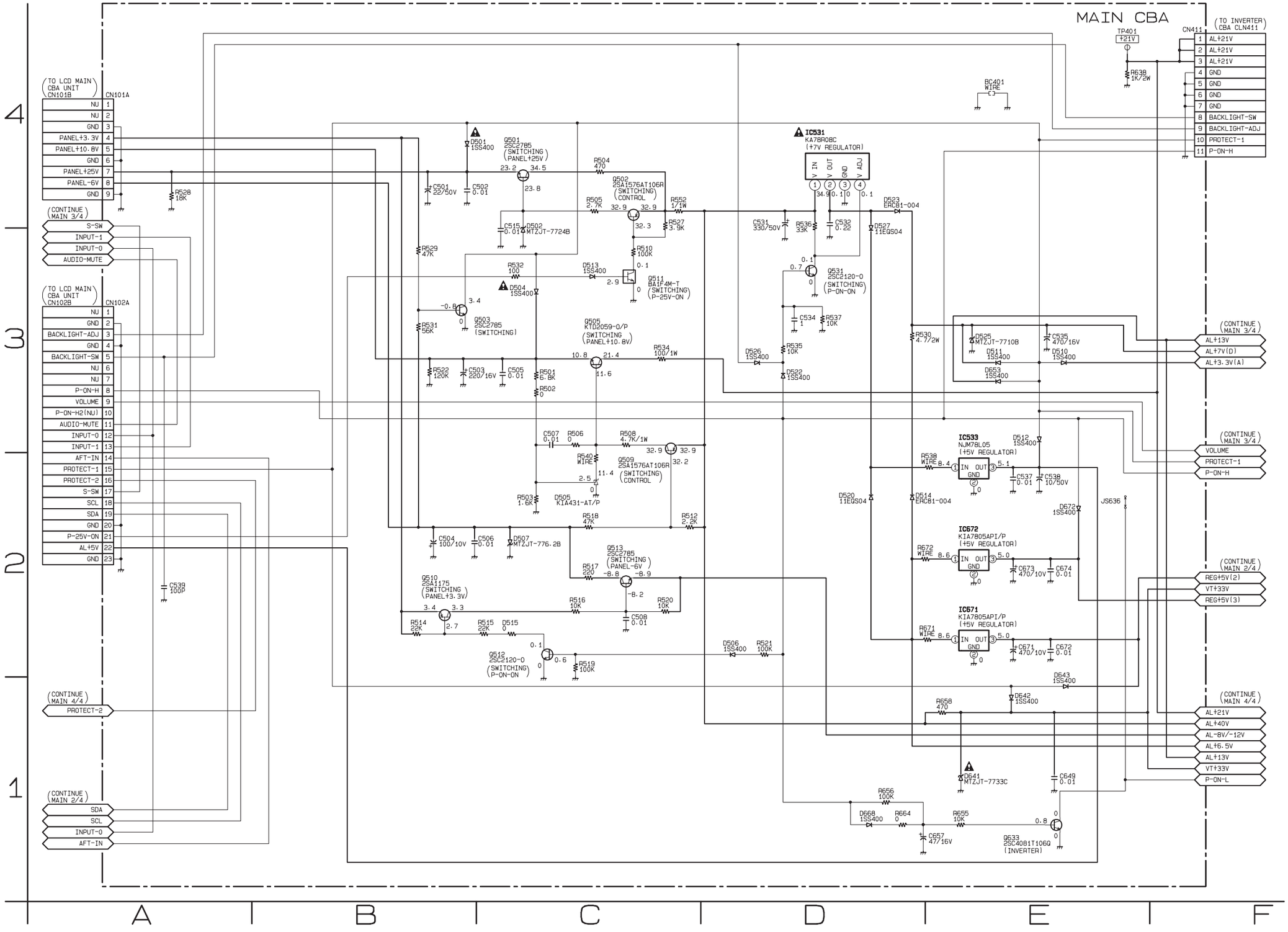
: Indicates a test point with a jumper wire across a hole in the PCB.

: Used to indicate a test point with a component lead on foil side.

: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

Main 1/4 Schematic Diagram



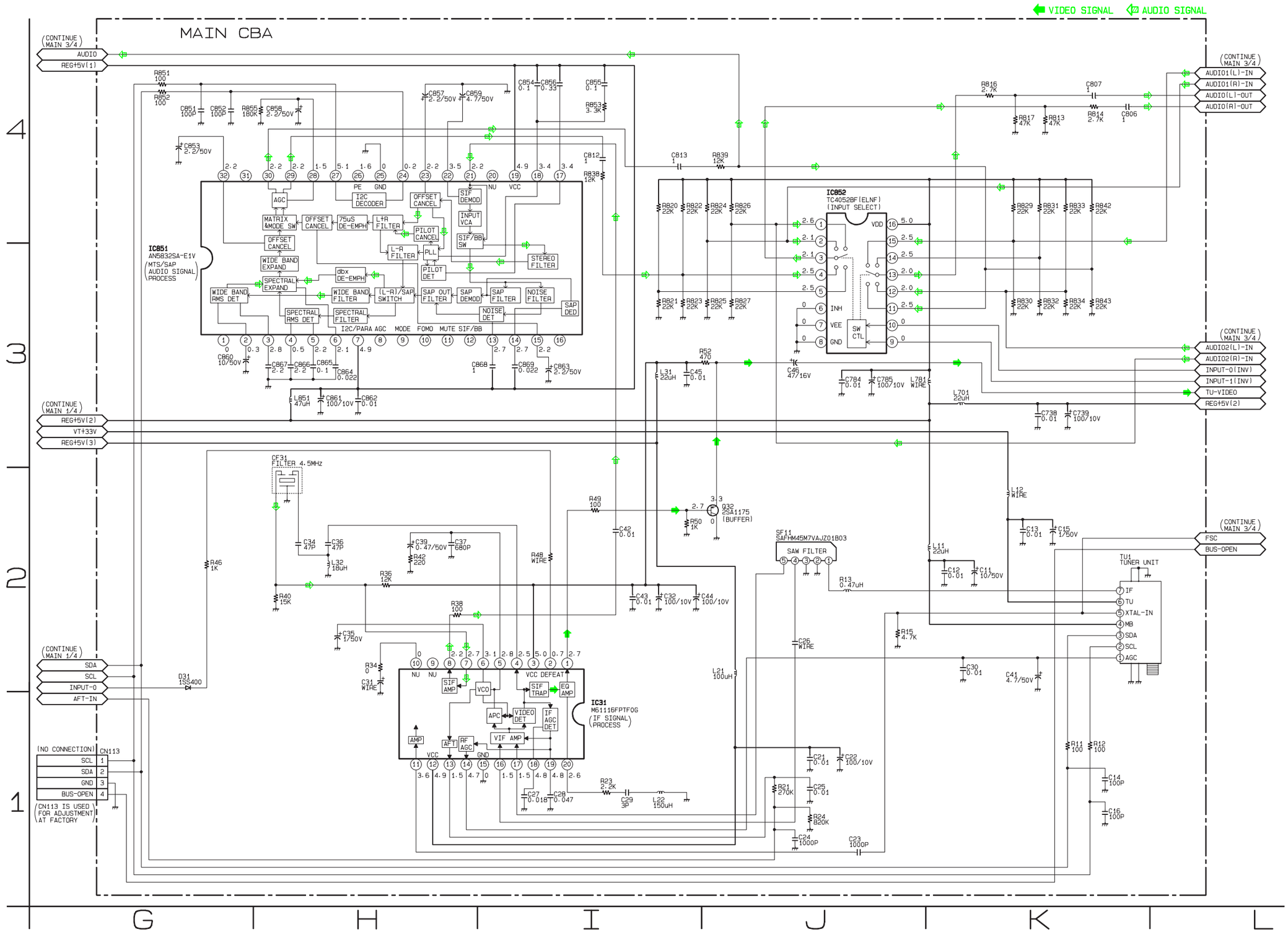
MAIN 1/4

Ref No.	Position
ICS	
IC531	D-4
IC533	E-3
IC671	E-2
IC672	E-2
TRANSISTORS	
Q501	C-4
Q502	C-4
Q503	B-3
Q505	C-3
Q509	C-3
Q510	B-2
Q511	C-3
Q512	C-2
Q513	C-2
Q531	D-3
Q633	E-1
CONNECTORS	
CN411	F-4
CN101A	A-4
CN102A	A-3
TEST POINT	
TP401	E-4

Main 2/4 Schematic Diagram

MAIN 2/4

Ref No.	Position
ICS	
IC31	I-1
IC851	H-3
IC852	J-4
TRANSISTOR	
Q32	J-2
CONNECTOR	
CN113	G-1

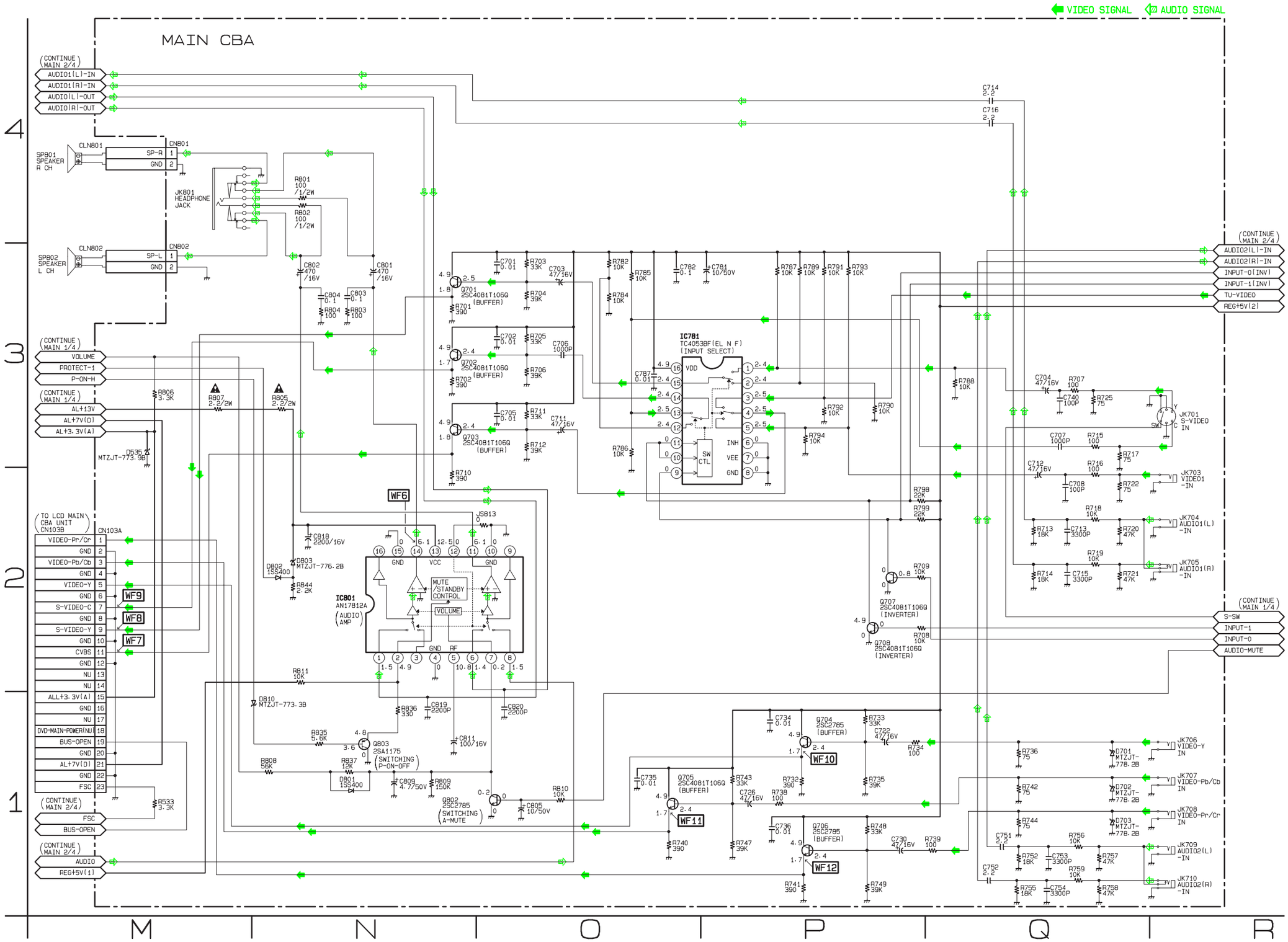


L3220SCM2

Main 3/4 Schematic Diagram

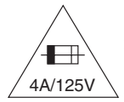
MAIN 3/4

Ref No.	Position
ICS	
IC781	P-3
IC801	N-2
TRANSISTORS	
Q701	N-3
Q702	N-3
Q703	N-3
Q704	P-1
Q705	O-1
Q706	P-1
Q707	P-2
Q708	P-2
Q802	O-1
Q803	N-1
CONNECTORS	
CN801	M-4
CN802	M-3
CN103A	M-2



Main 4/4 Schematic Diagram

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

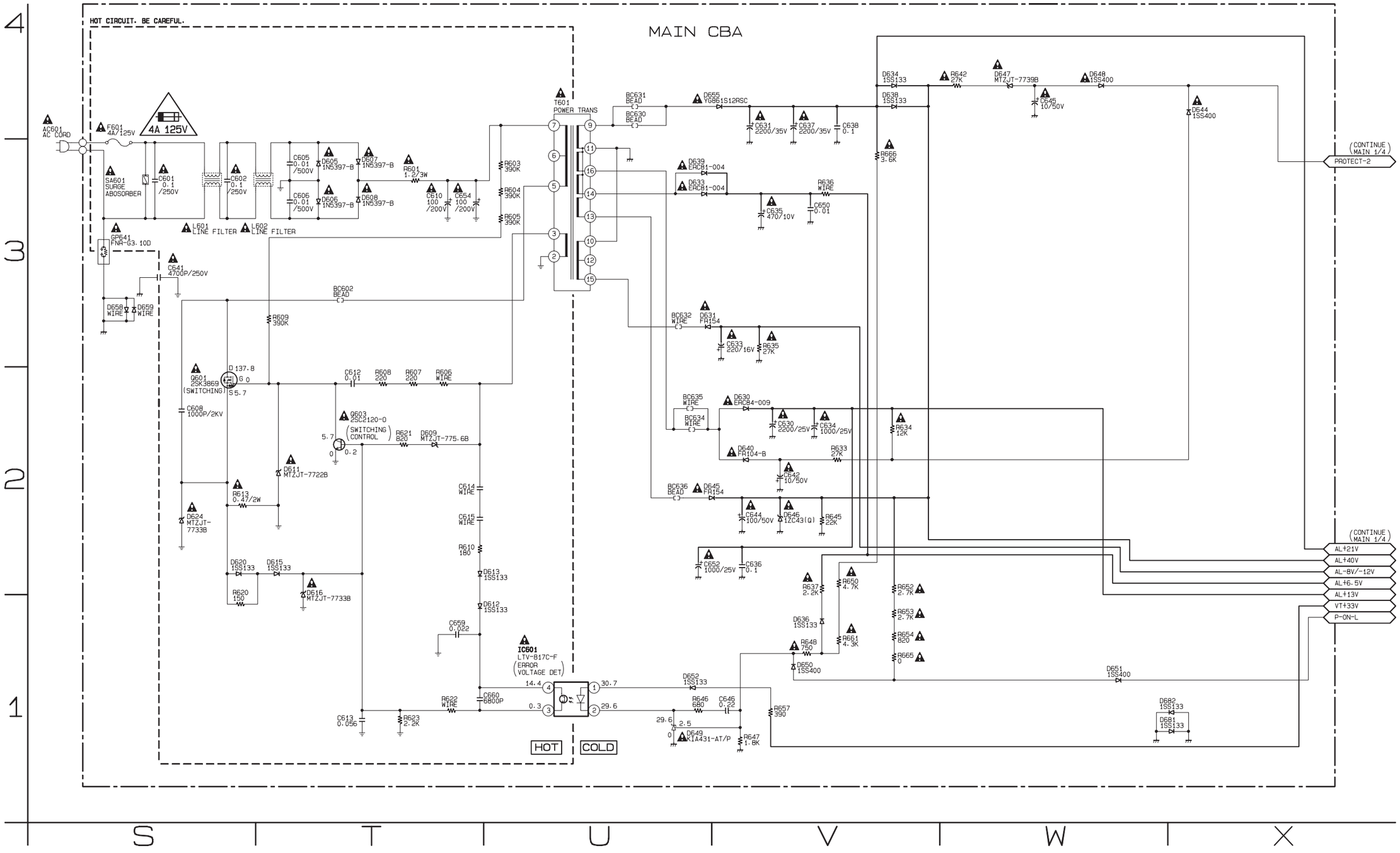


CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 125V.

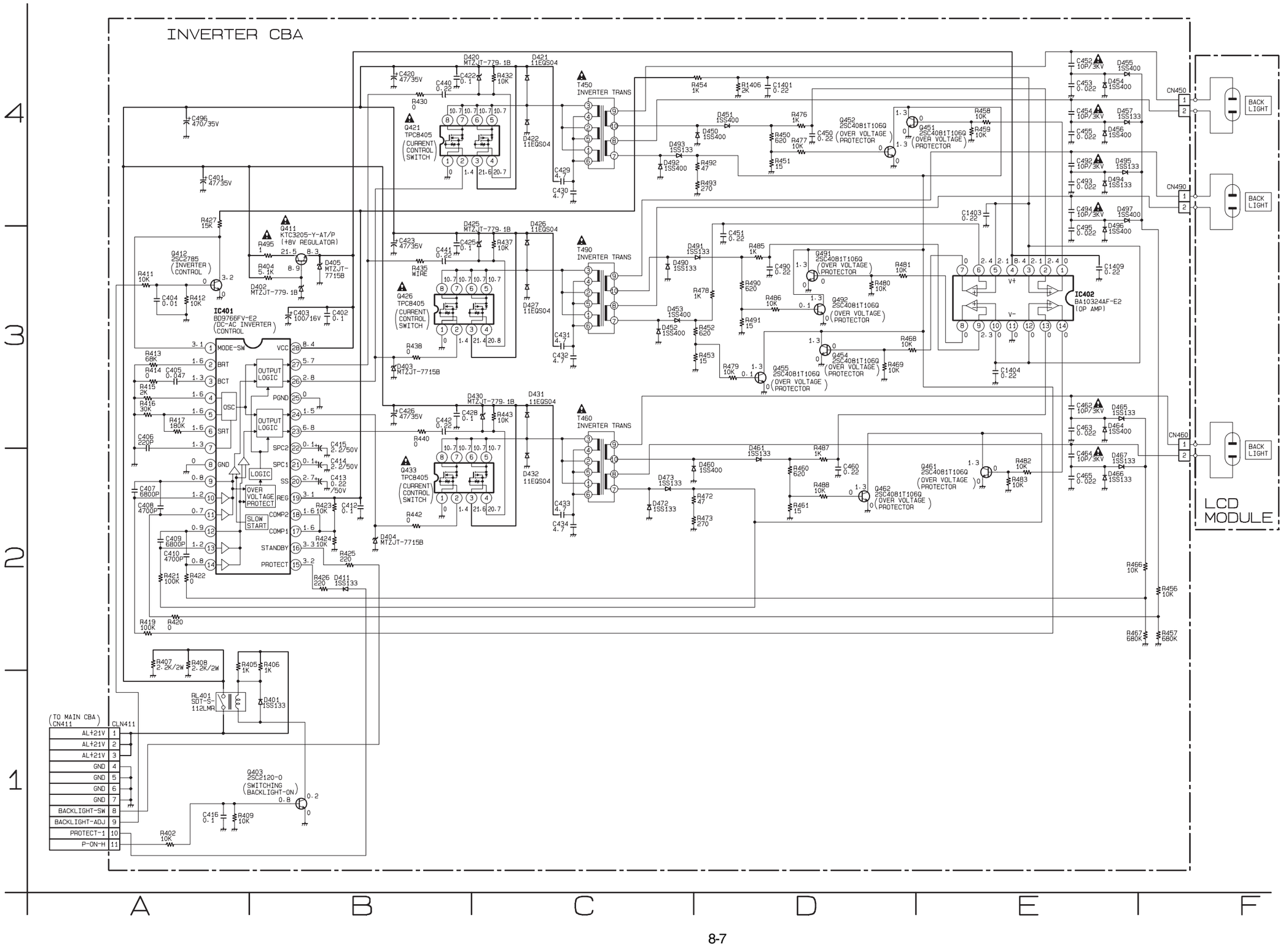
NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

MAIN 4/4

Ref No.	Position
IC	
IC601	U-1
TRANSISTORS	
Q601	S-2
Q603	T-2



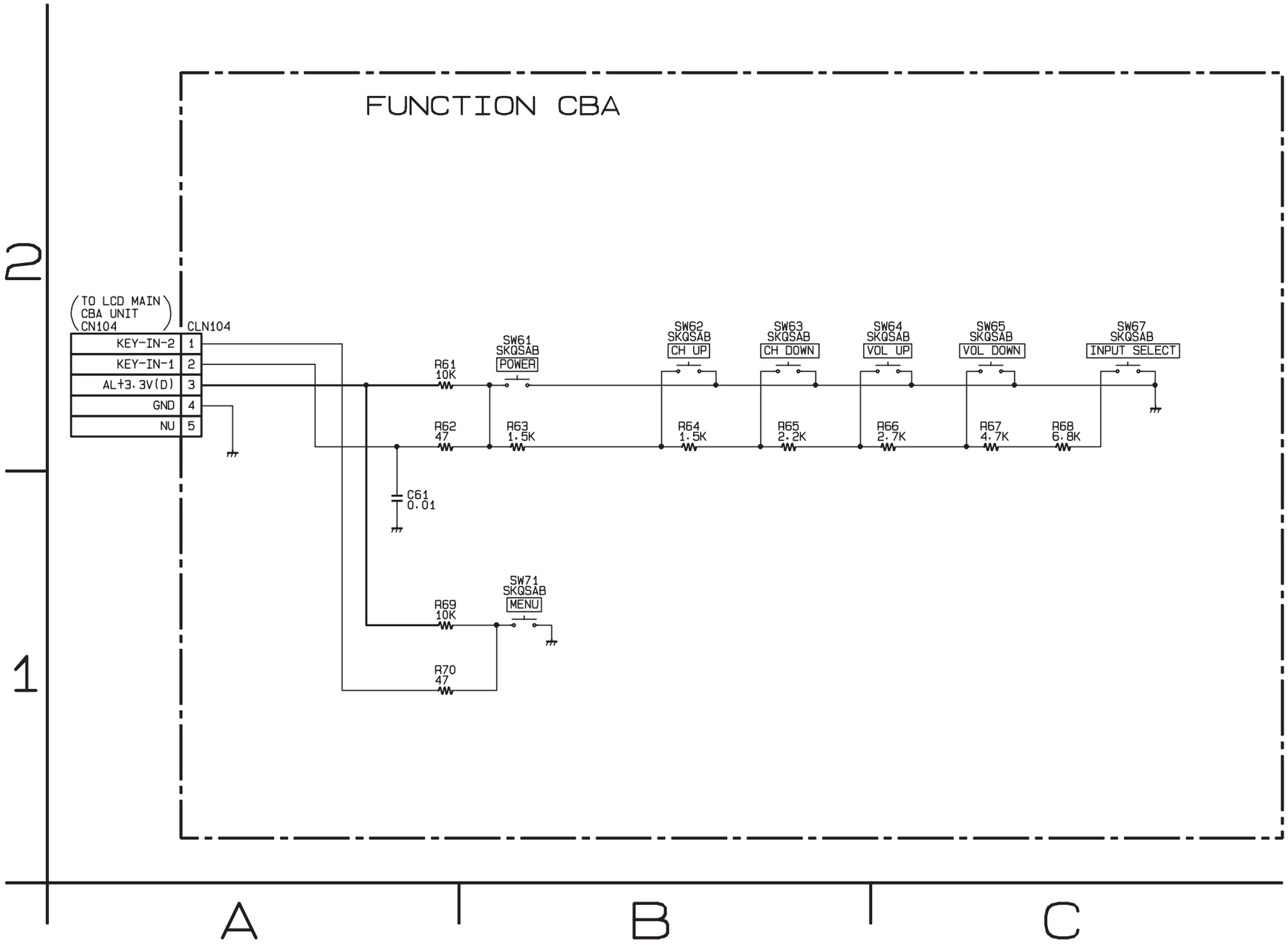
Inverter Schematic Diagram



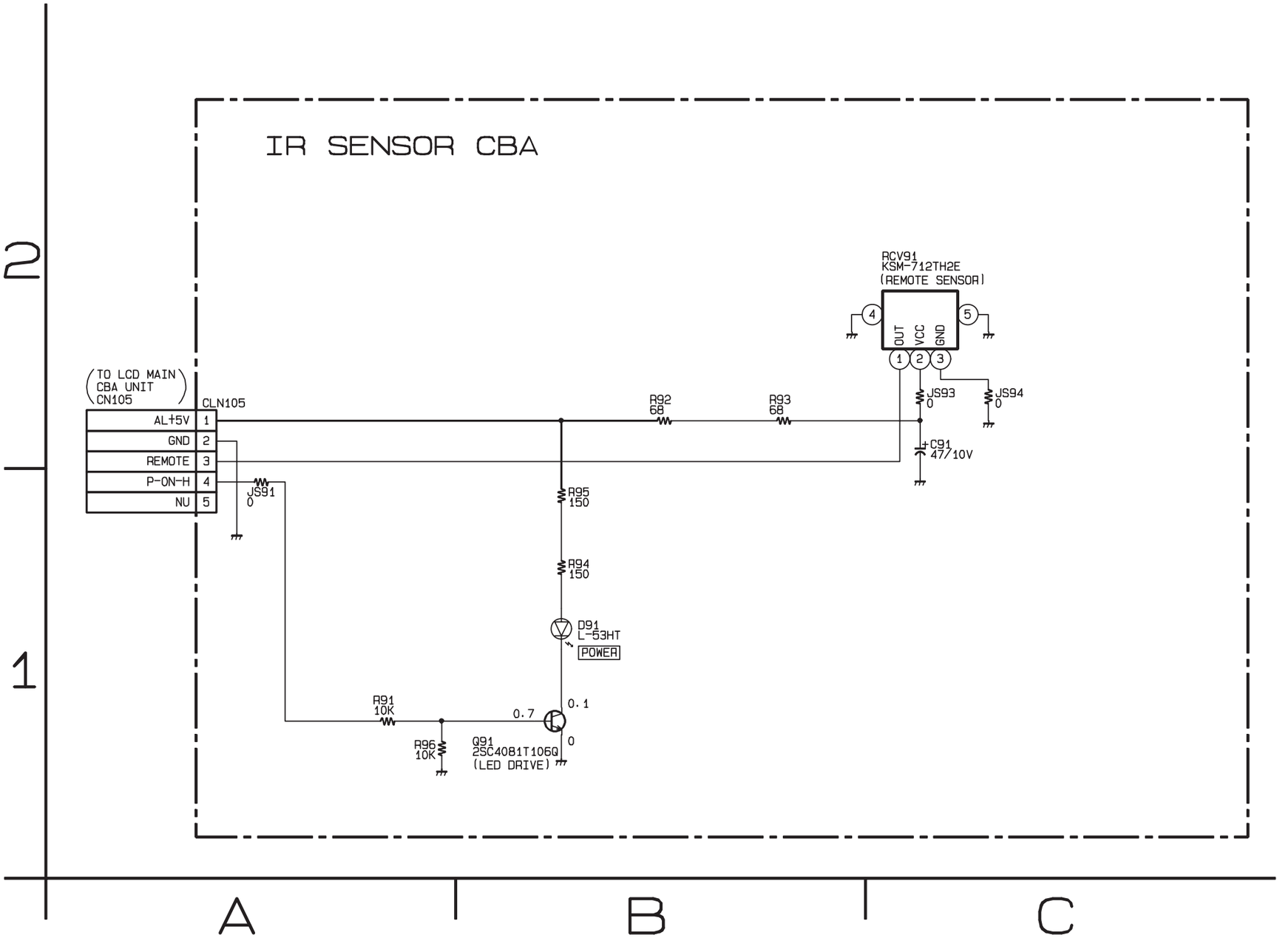
INVERTER

Ref No.	Position
ICS	
IC401	A-3
IC402	E-3
TRANSISTORS	
Q403	B-1
Q411	B-3
Q412	B-3
Q421	B-4
Q426	B-3
Q433	B-2
Q451	E-4
Q452	D-4
Q454	D-3
Q455	D-3
Q461	E-2
Q462	D-2
Q491	D-3
Q492	D-3
CONNECTORS	
CLN411	A-1
CN450	F-4
CN460	F-2
CN490	F-4

Function Schematic Diagram



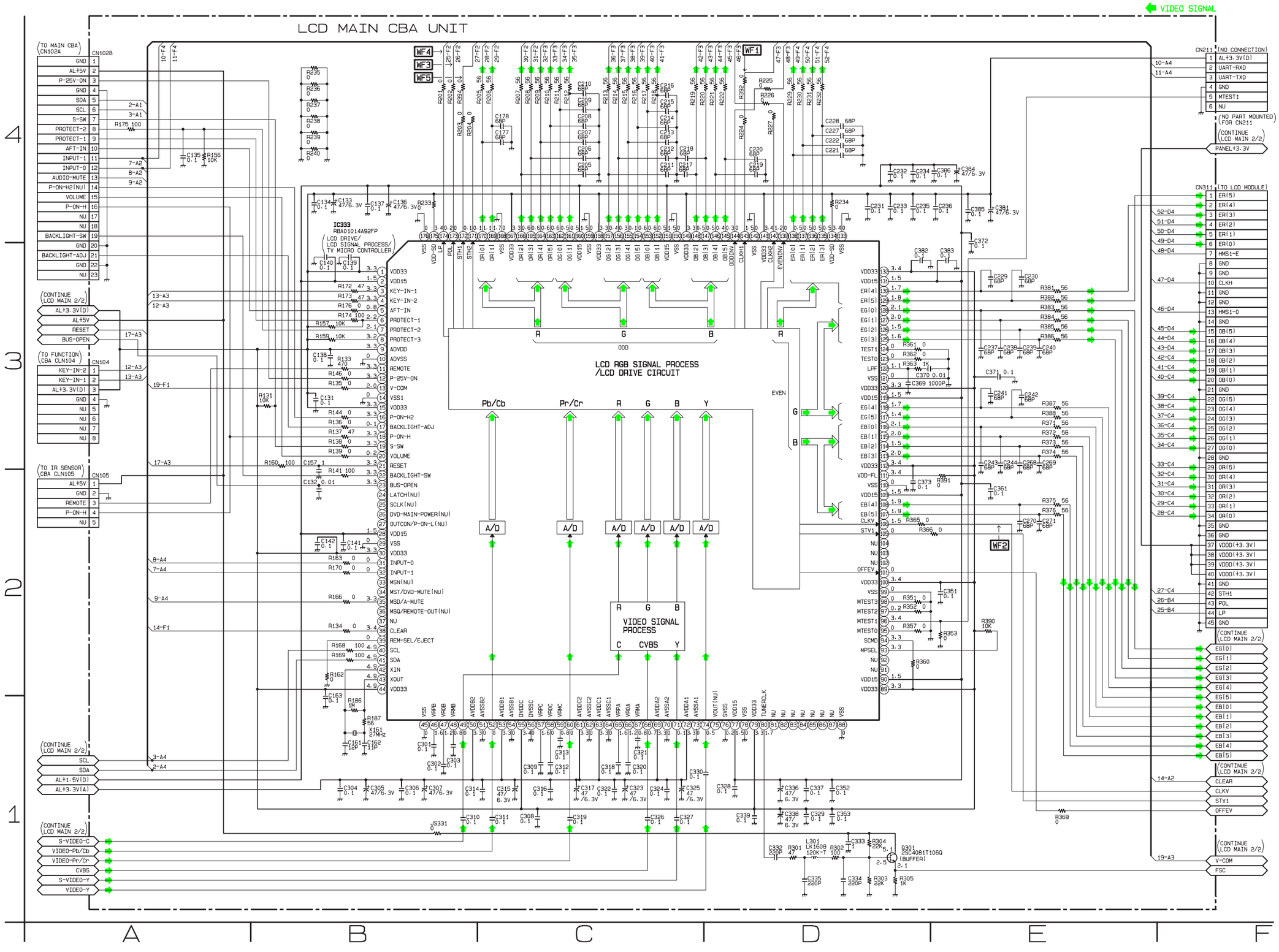
IR Sensor Schematic Diagram



LCD Main 1/2 Schematic Diagram

LCD MAIN 1/2

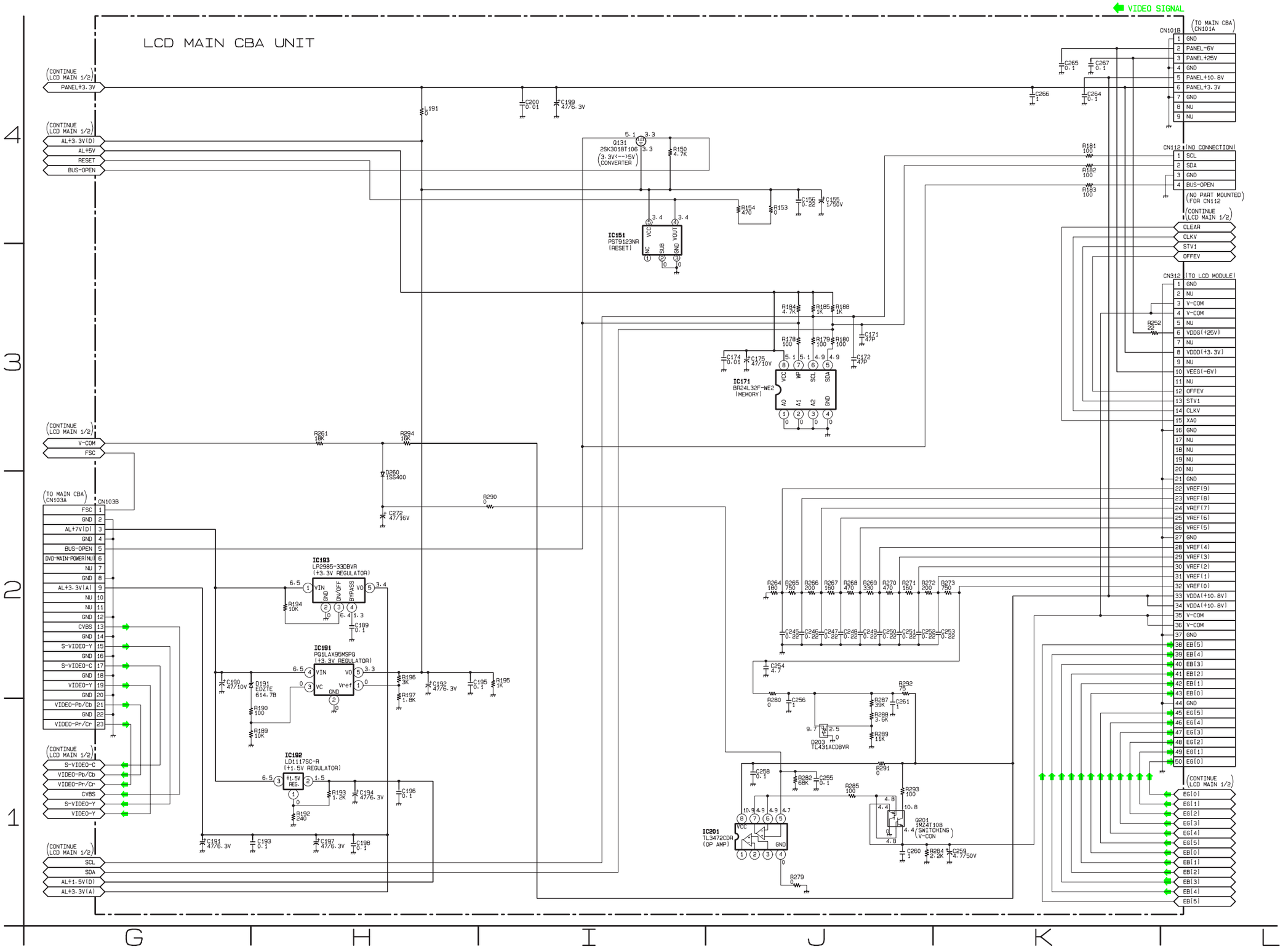
Ref No.	Position
IC	
IC333	B-3
TRANSISTOR	
Q301	D-1
CONNECTORS	
CN104	A-3
CN105	A-2
CN211	F-4
CN311	F-4
CN102B	A-4



LCD Main 2/2 Schematic Diagram

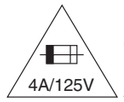
LCD MAIN 2/2

Ref No.	Position
ICS	
IC151	I-3
IC171	J-3
IC191	H-2
IC192	H-1
IC193	H-2
IC201	J-1
TRANSISTORS	
Q131	I-4
Q201	J-1
CONNECTORS	
CN112	L-4
CN312	L-3
CN101B	L-4
CN103B	G-2



Main CBA Top View

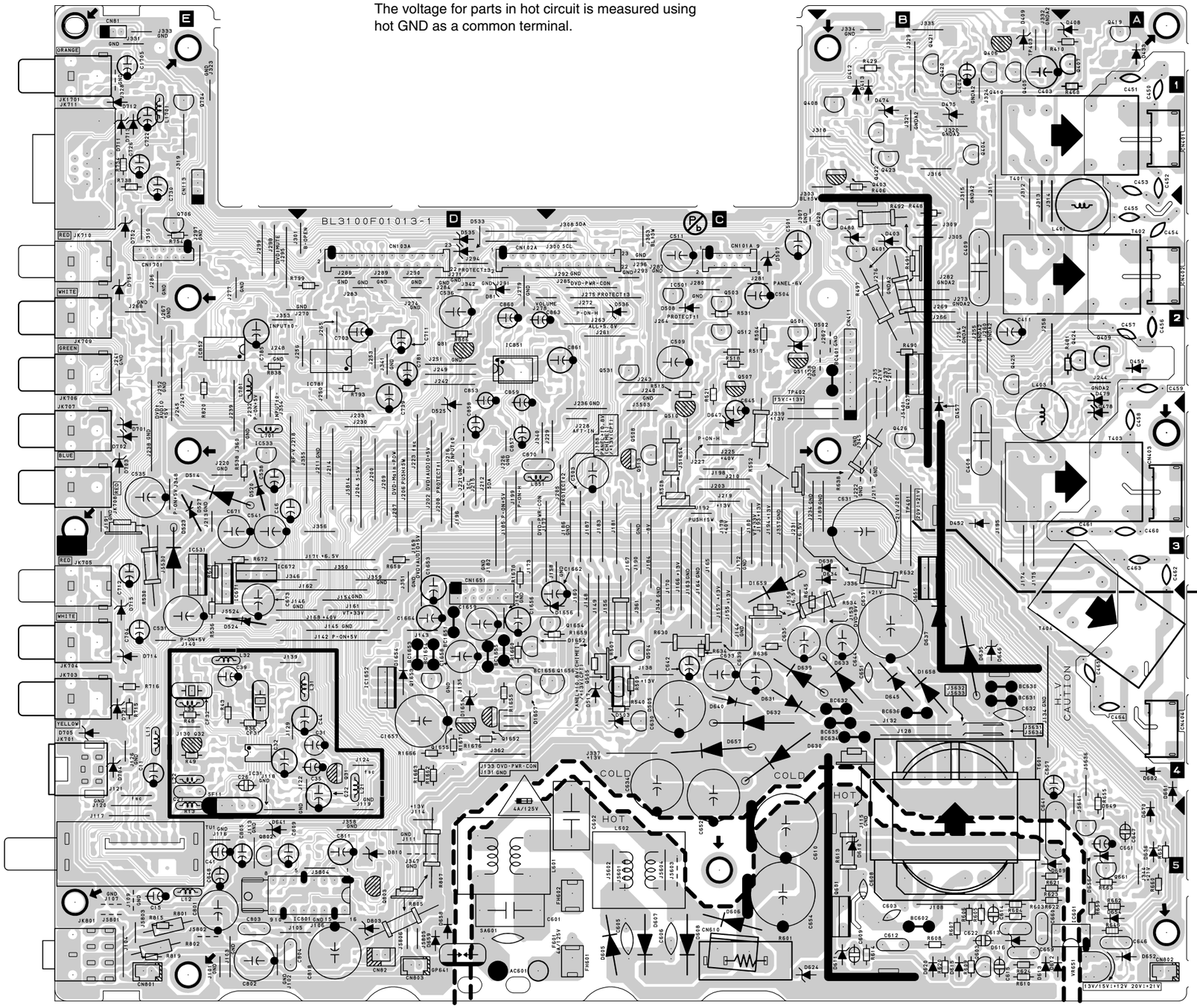
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.



CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 125V.

Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly,when troubleshooting this type power supply circuit, a variable isolation transformer is required.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



Main CBA Bottom View

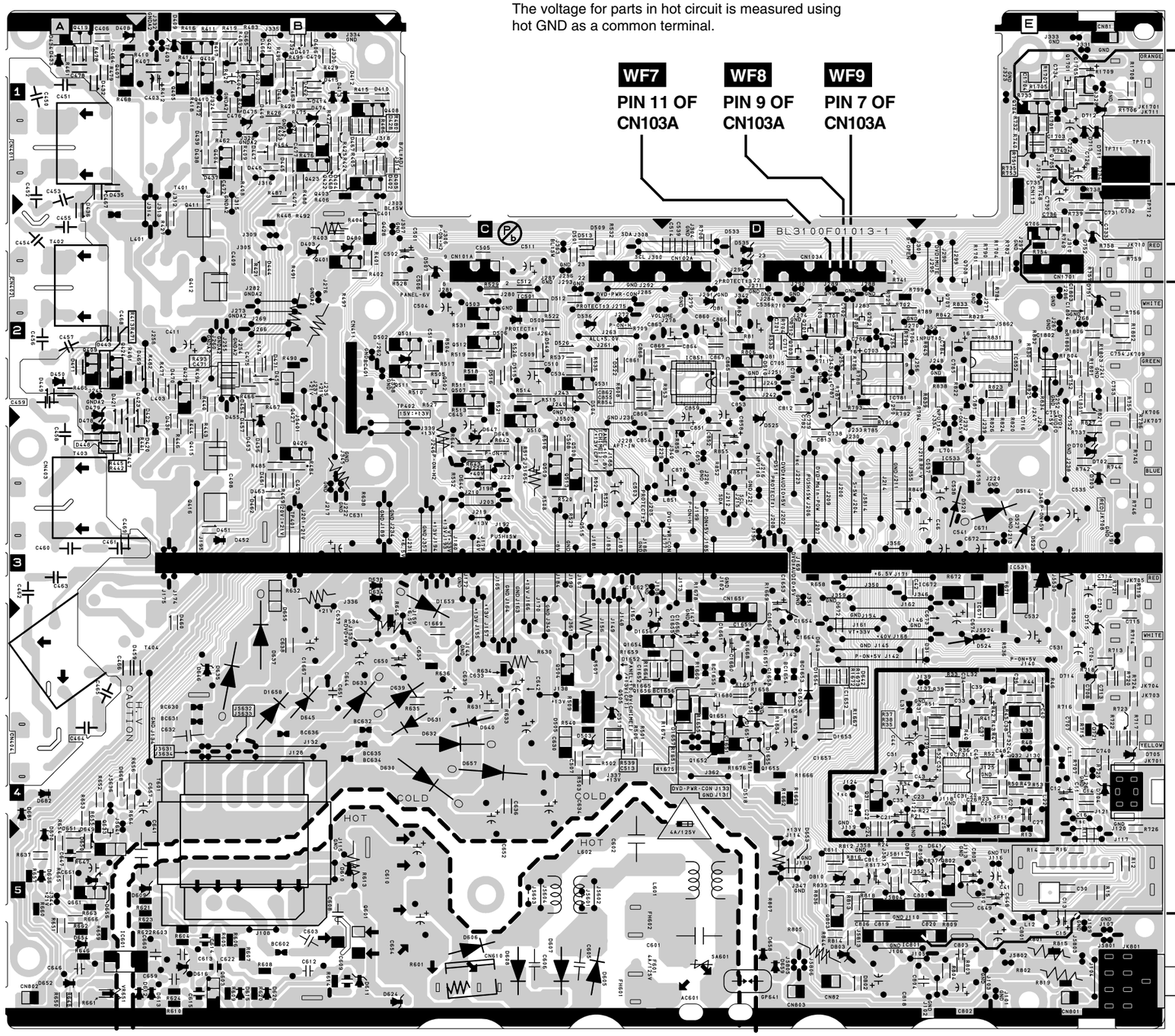
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

4A/125V

CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 125V.

Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly,when troubleshooting this type power supply circuit, a variable isolation transformer is required.

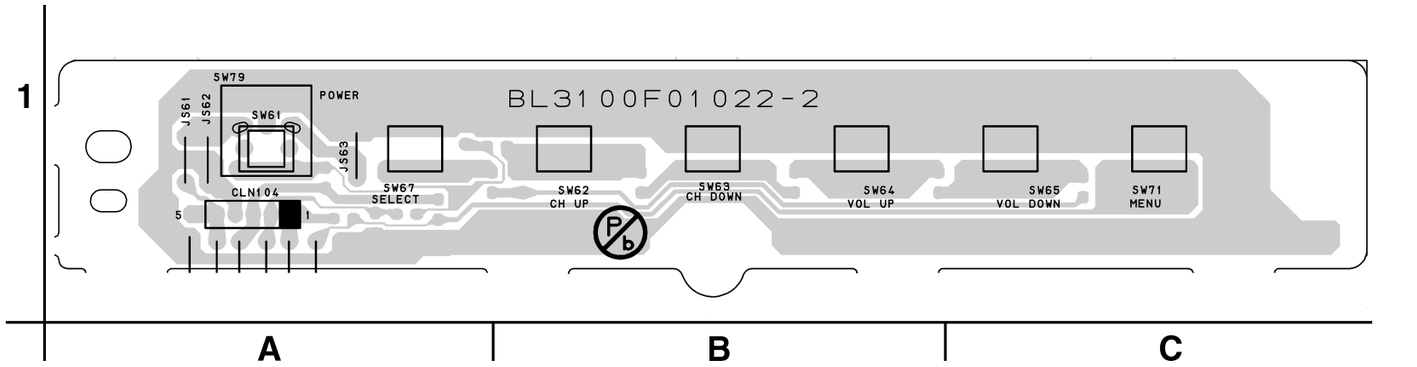
NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



MAIN CBA

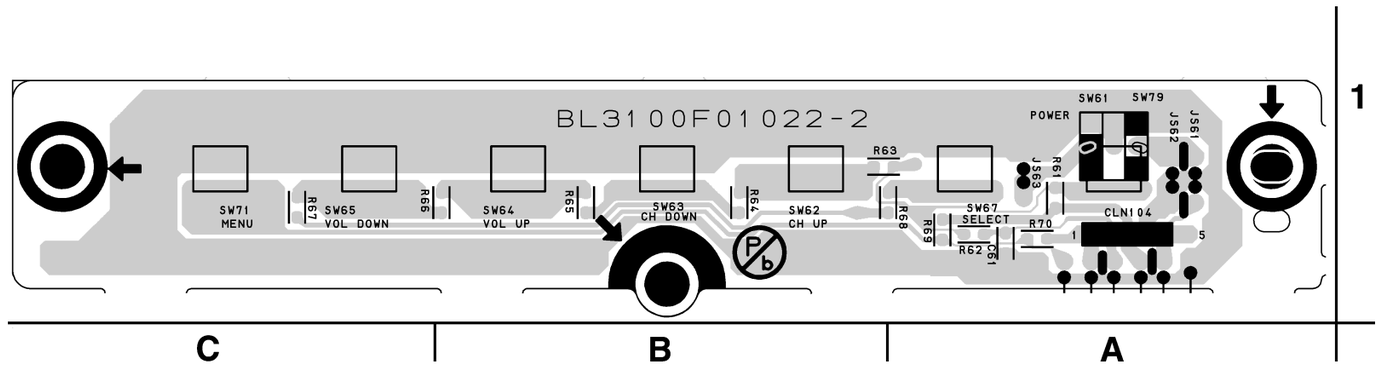
Ref No.	Position
ICS	
IC31	E-4
IC531	E-3
IC533	E-3
IC601	A-5
IC671	E-4
IC672	E-3
IC781	D-2
IC801	D-5
IC851	D-2
IC852	E-2
TRANSISTORS	
Q32	E-4
Q501	C-2
Q502	C-2
Q503	C-2
Q505	C-4
Q509	C-3
Q510	C-3
Q511	C-2
Q512	C-2
Q513	C-3
Q531	C-2
Q601	B-5
Q603	B-5
Q633	A-5
Q701	D-2
Q702	D-2
Q703	D-2
Q704	E-1
Q705	E-1
Q706	E-2
Q707	E-2
Q708	E-2
Q802	E-5
Q803	D-5
CONNECTORS	
CN113	E-1
CN411	B-2
CN801	E-5
CN802	A-5
CN101A	C-2
CN102A	D-2
CN103A	D-2
TEST POINT	
TP401	B-3

Function CBA Top View



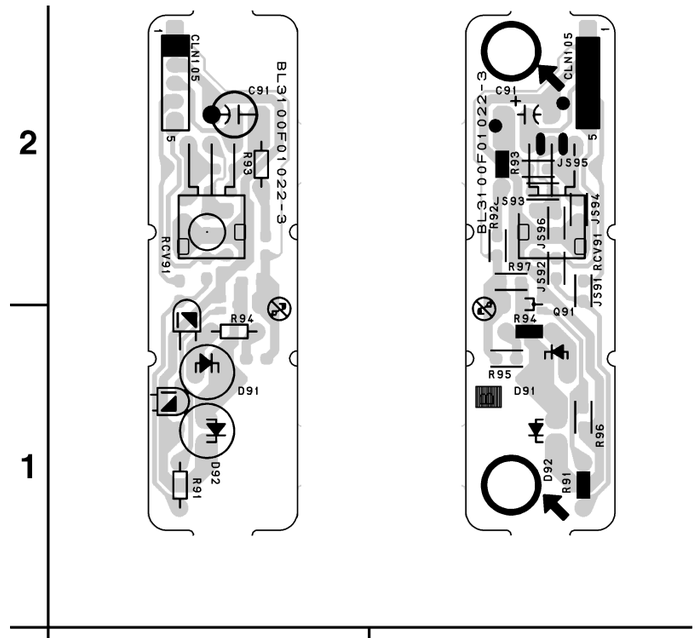
BL3100F01022-2

Function CBA Bottom View



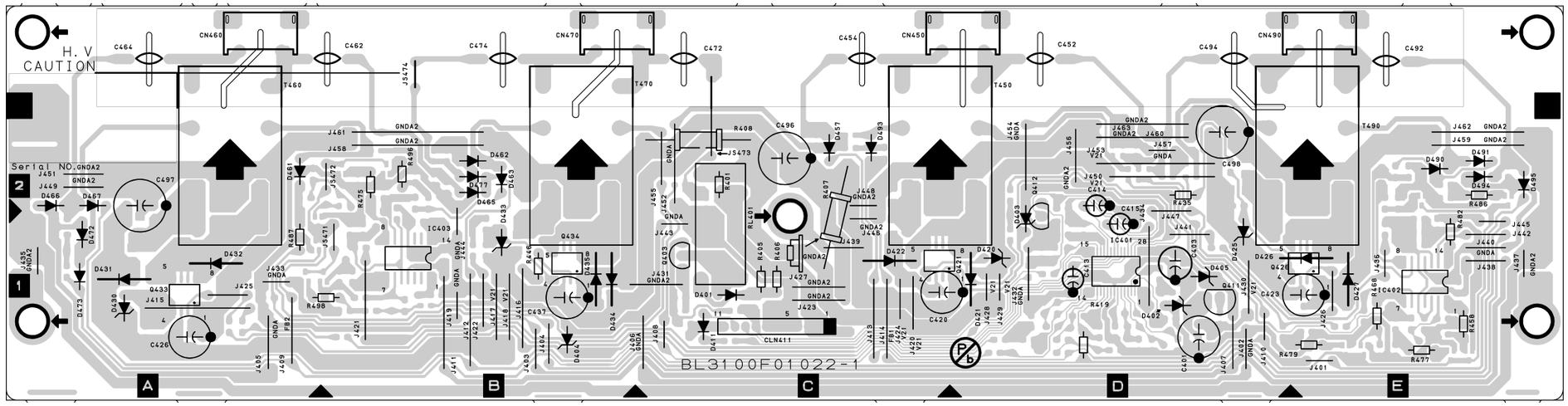
BL3100F01022-2

IR Sensor CBA Top & Bottom View



BL3100F01022-3

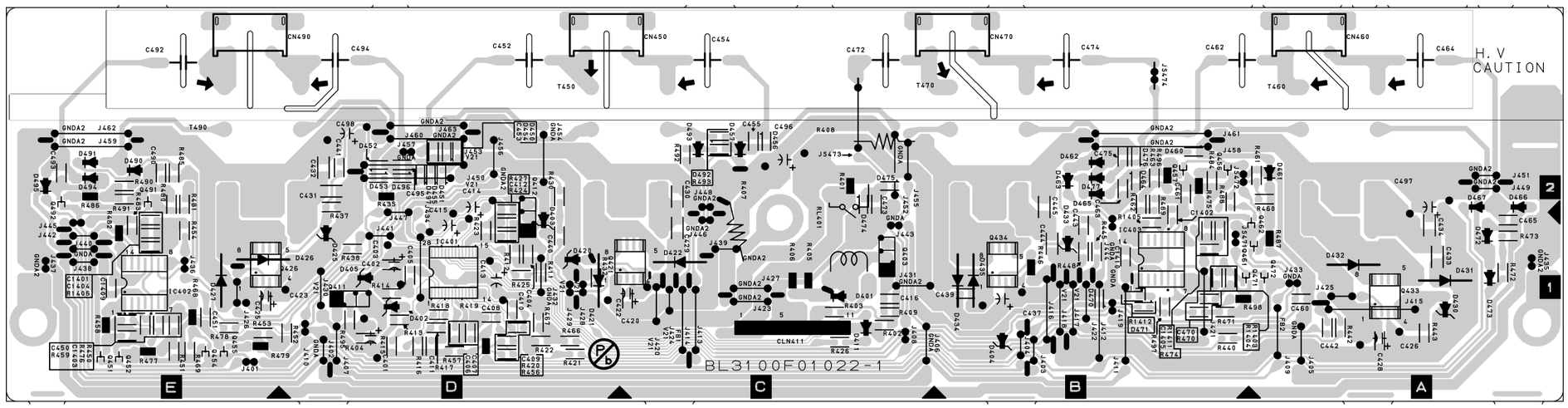
Inveretr CBA Top View



INVERTER

Ref No.	Position
ICS	
IC401	D-1
IC402	E-1
TRANSISTORS	
Q403	C-1
Q411	D-1
Q412	D-2
Q421	D-1
Q426	D-1
Q433	A-1
Q451	E-1
Q452	E-1
Q454	E-1
Q455	E-1
Q461	A-1
Q462	A-1
Q491	E-2
Q492	E-2
CONNECTORS	
CLN411	C-1
CN450	C-2
CN460	A-2
CN490	D-2

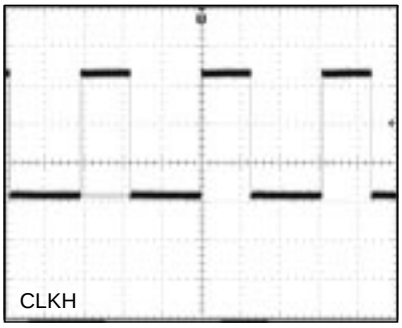
Inverter CBA Bottom View



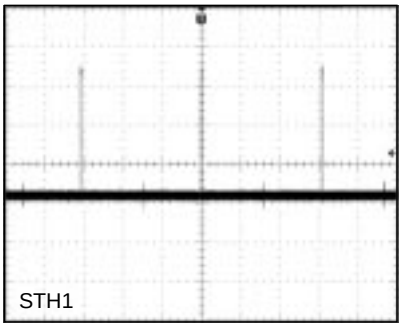
WAVEFORMS

WF1 ~ WF12 = Waveforms to be observed at
Waveform check points.
(Shown in Schematic Diagram.)

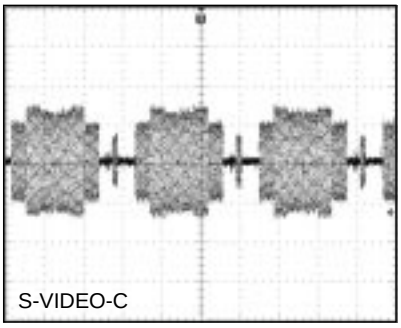
Input: NTSC Color Bar Signal (with 1kHz Audio Signal)



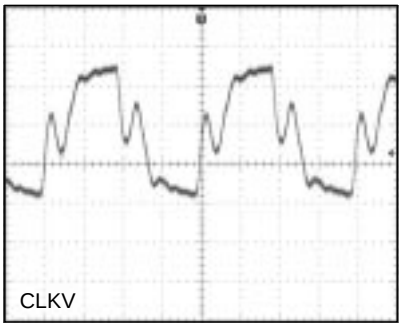
WF1 1DIV: 1.0V 10µs
R392



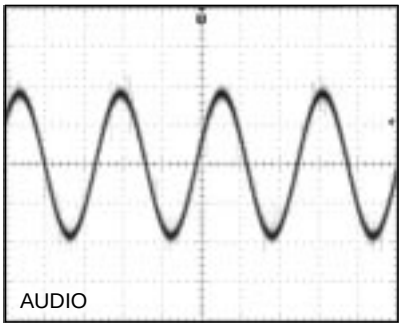
WF5 1DIV: 1.0V 10µs
R394



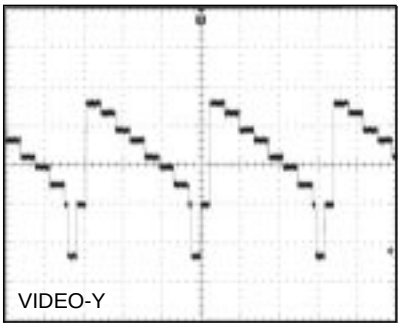
WF9 1DIV: 200mV 20µs
Pin 7 of CN103A



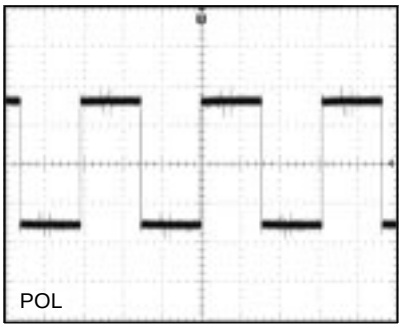
WF2 1DIV: 1.0V 20ns
R365



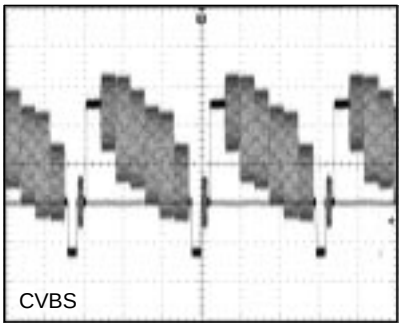
WF6 1DIV: 100mV 400 µs
Pin 14 of IC801



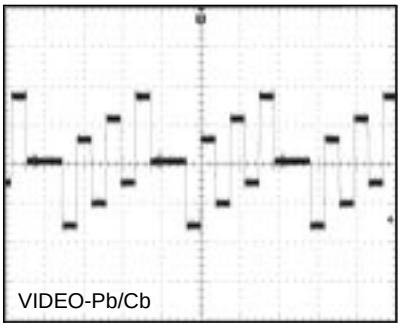
WF10 1DIV: 200mV 20µs
Q704 Emitter



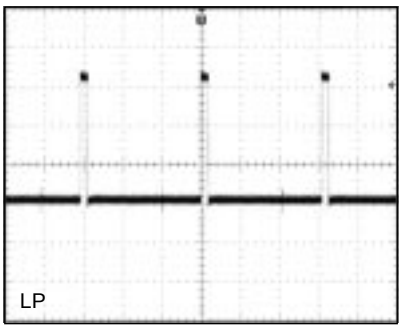
WF3 1DIV: 1.0V 20µs
R202



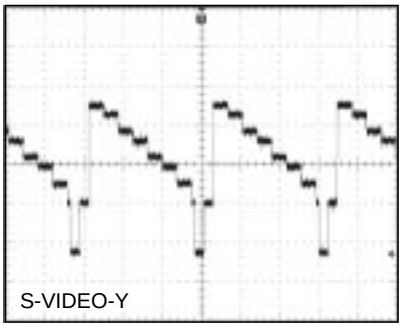
WF7 1DIV: 200mV 20µs
Pin 11 of CN103A



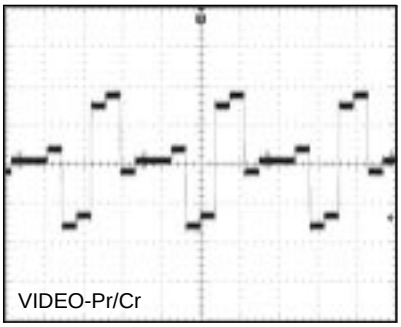
WF11 1DIV: 200mV 20µs
Q705 Emitter



WF4 1DIV: 1.0V 10µs
R201

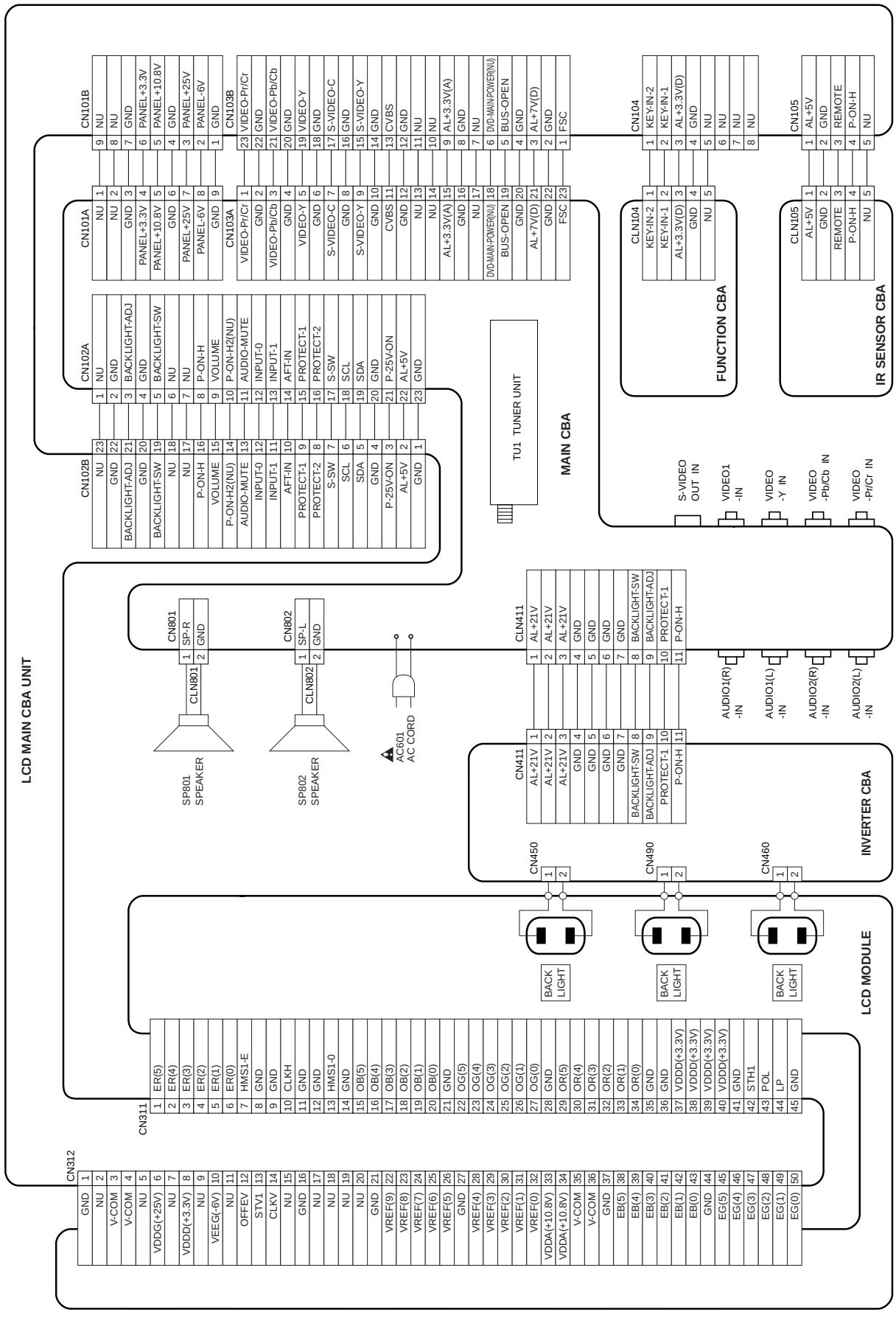


WF8 1DIV: 200mV 20µs
Pin 9 of CN103A



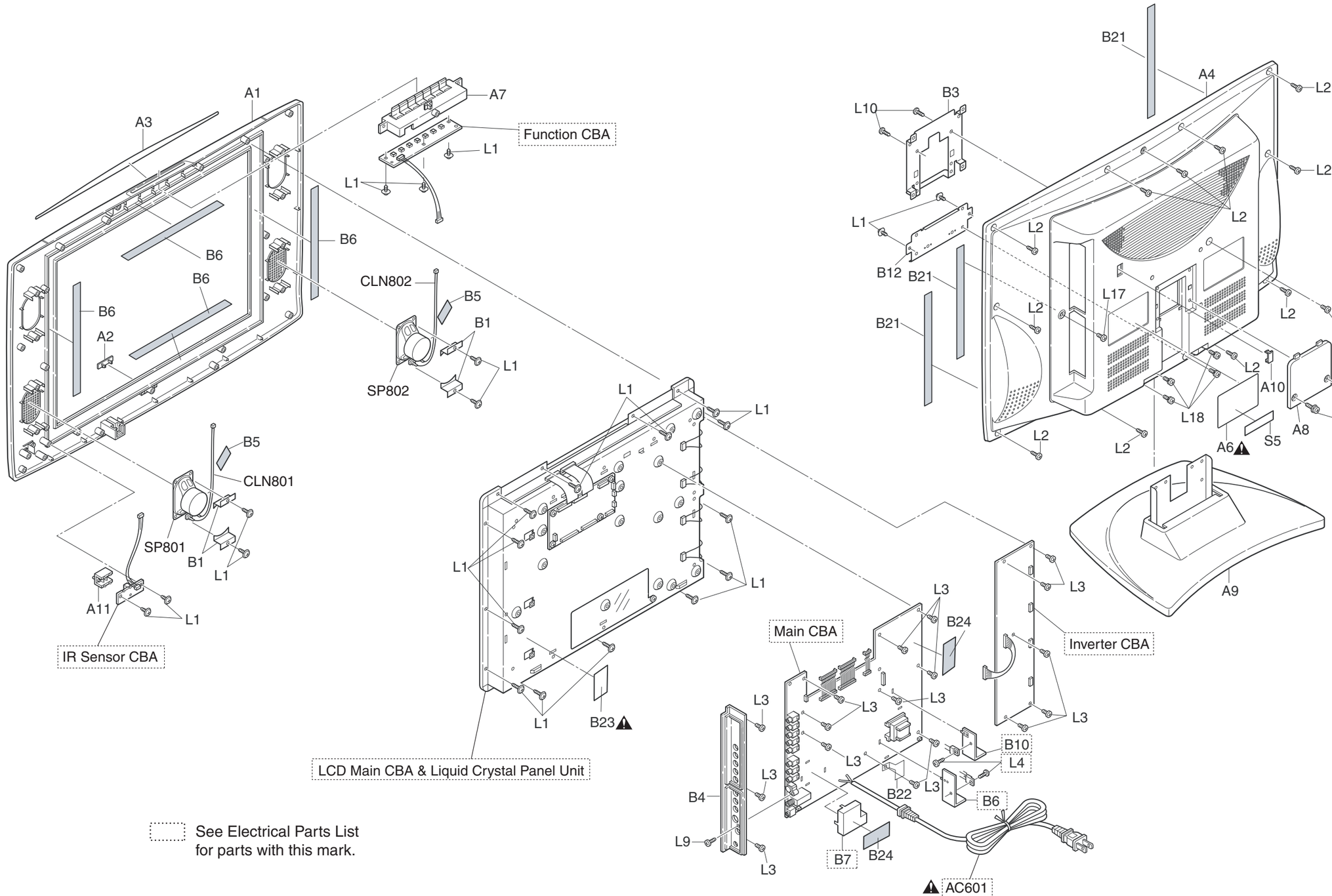
WF12 1DIV: 200mV 20µs
Q706 Emitter

WIRING DIAGRAM



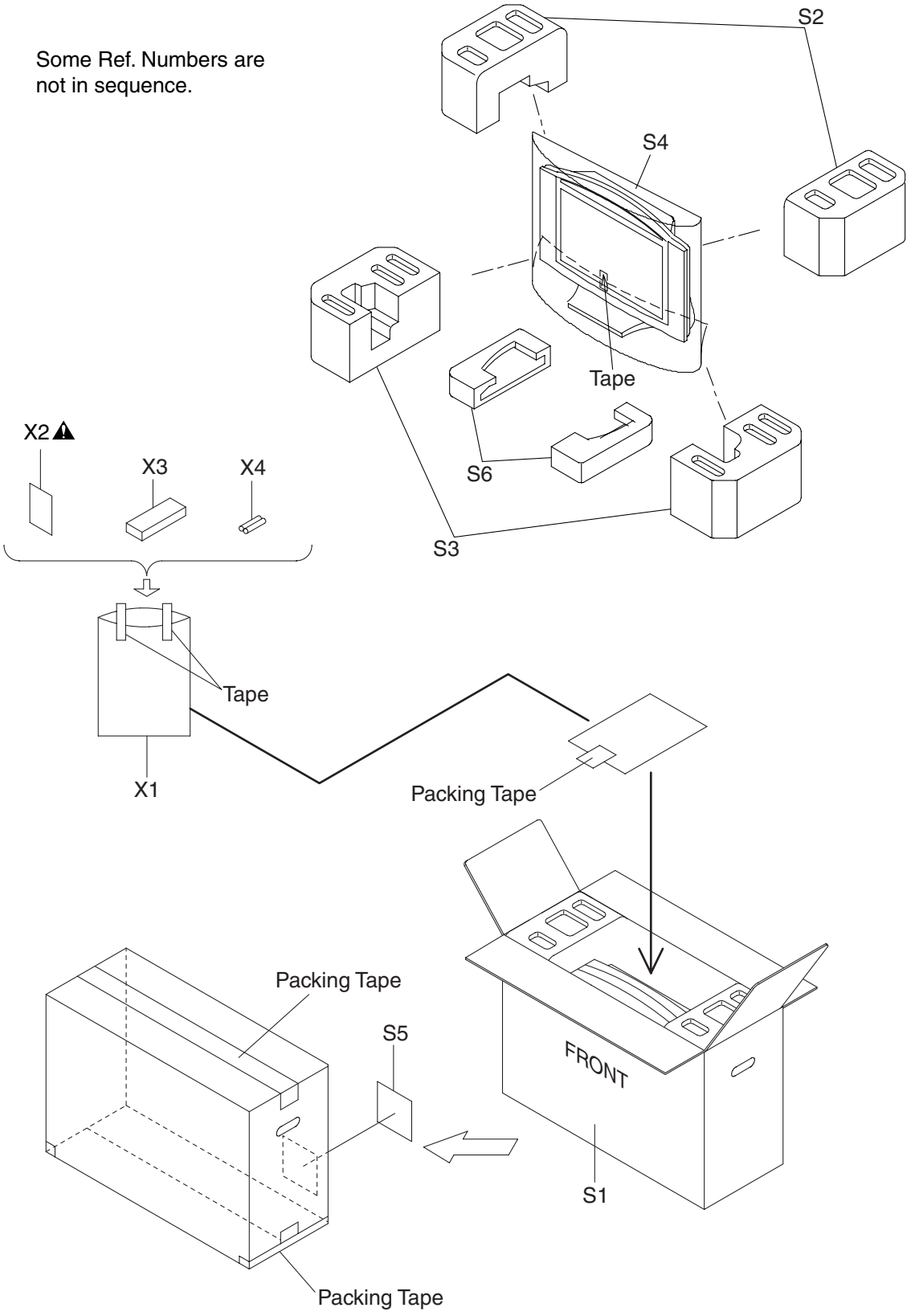
EXPLODED VIEWS

Cabinet



See Electrical Parts List for parts with this mark.

Packing


Some Ref. Numbers are not in sequence.
S2
S4
Tape
S6
S3
X2 ⚠
X3
X4
Tape
X1
Packing Tape
Packing Tape
S5
FRONT
S1
Packing Tape

MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that are not assigned part numbers (---------) are not available.

Ref. No.	Description	Part No.
A1	FRONT CABINET L3200UA	1EM020185
A2	BRAND BADGE L0200UA~SYLVANIA~	0EM409019
A3	CONTROL PLATE L0301UB	1EM220019
A4	REAR CABINET L3200UA	1EM020138
A6⚠	RATING LABEL L3220UA	---------
A7	FUNCTION KNOB L0301UB	1EM220005A
A8	REAR COVER L3207UH	1EM420953
A9	TILT STAND ASSEMBLY L0301UB	1EMN20039A
A10	CONNECTOR CAP L3200UA	1EM420645
A11	SENSOR/LED LENS L0301UB	1EM220004
B1	SPEAKER HOLDER L0110UA	0EM407855C
B3	STAND HOLDER L0200UA	0EM301999B
B4	JACK HOLDER L3201UB	1EM120107
B5	CLOTH(10X30XT0.5) B5900UA	0EM404486
B6	CLOTH(15X190XT 0.5) L0100JA	0EM407894
B12	20V TILT STAND HOLDER L4200EA	1EM320145
B21	CLOTH(10X180XT0.5) L0336JG	0EM408827
B22	INSULATION PLATE L3207UH	1EM421108
B23⚠	CAUTION LABEL L3207UH	---------
B24	CLOTH(20X65XT0.5) L0100JA	0EM407914
CLN801	SPEAKER WIRE ASSEMBLY 2P WIRE ASSEMBLY	WX1L3201-001
CLN802	SPEAKER WIRE ASSEMBLY 2P WIRE ASSEMBLY	WX1L3201-001
L1	SCREW P-TIGHT 3X14 WASHER HEAD+	GCMP3140
L2	SCREW P-TIGHT 3X12 BIND HEAD+	GBMP3120
L3	SCREW S-TIGHT M3X8 BIND HEAD+	GBMS3080
L6	DOUBLE SEMS SCREW M4X9 L0130UA	0EM408146
L9	SCREW P-TIGHT 3X10 BIND HEAD+	GBKP3100
L10	P-TIGHT SCREW 3X8 BIND +	GBMP3080
L17	SCREW S-TIGHT M3X8 BIND HEAD + BLK	GBKS3080
L18	DOUBLE SEMS SCREW M4X12 + BLAK	FPK34120
SP801	SPEAKER S0407F10	DSD0807XQ002
SP802	SPEAKER S0407F10	DSD0807XQ002
PACKING		
S1	CARTON L3200UA	1EM420656
S2	STYROFOAM TOP L0301UB	1EM020018A
S3	STYROFOAM BOTTOM L0301UB	1EM020019A
S4	SET BAG L3207UH	1EM320295
S5	SERIAL NO. LABEL L9750UA	---------
S6	STYROFOAM STAND BOTTOM L0301UB	1EM020020A
ACCESSORIES		
X1	BAG POLYETHYLENE 235X365XT0.03	0EM408420A
X2⚠	OWNERS MANUAL L3200UA	1EMN20336
X3	REMOTE CONTROL 170/ECNLC301/NE900UD	NE900UD
X4	DRY BATTERY R03/2S	XB0M451T0006

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1%

G.....±2% J.....±5% K.....±10%

M.....±20% N.....±30% Z.....+80/-20%

LCD MAIN CBA & LIQUID CRYSTAL PANEL UNIT

Ref. No.	Description	Part No.
	LCD MAIN CBA & LIQUID CRYSTAL PANEL UNIT	1FSA10076

MAIN CBA

Ref. No.	Description	Part No.
	MAIN CBA Consists of the following:	1ESA11493
	CAPACITORS	
C11	ELECTROLYTIC CAP. 10μF/ 50V M	CA1J100SP085
C12	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C13	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C14	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C15	ELECTROLYTIC CAP 1μF/ 50V M	CA1J1R0SP085
C16	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C21	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C22	ELECTROLYTIC CAP. 100μF/ 10V M H7	CE1AMASSM101
C23	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C24	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C25	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C26	PCB JUMPER D0.6-P5.0	JW5.0T
C27	FILM CAP.(P) 0.018μF/ 50V J	CA1J183MS029
C28	CHIP CERAMIC CAP.(1608) B K 0.047μF/ 50V	CHD1JK30B473
C29	CHIP CERAMIC CAP. CH D 3pF/50V	CHD1JD3CH3R0
C30	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C31	PCB JUMPER D0.6-P5.0	JW5.0T
C32	ELECTROLYTIC CAP. 100μF/ 10V M H7	CE1AMASSM101
C34	CHIP CERAMIC CAP.(1608) CH J 47pF/50V	CHD1JJ3CH470
C35	ELECTROLYTIC CAP. 1μF/ 50V M H7	CE1JMASSM1R0
C36	CHIP CERAMIC CAP.(1608) CH J 47pF/50V	CHD1JJ3CH470
C37	CHIP CERAMIC CAP. CH J 680pF/50V	CHD1JJ3CH681
C39	ALUMINUM ELECTROLYTIC CAP 0.47μF/ 50V H7	CE1JMASSMR47
C41	ELECTROLYTIC CAP. 4.7μF/ 50V M	CA1J4R7SP085
C42	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C43	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C44	ELECTROLYTIC CAP. 100μF/ 10V M H7	CE1AMASSM101
C45	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C46	ELECTROLYTIC CAP. 47μF/ 16V M	CA1C470SP085
C501	ELECTROLYTIC CAP. 22μF/ 50V M	CA1J220SP085
C502	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C503	ELECTROLYTIC CAP. 220μF/ 16V M	CA1C221SP085
C504	ELECTROLYTIC CAP. 100μF/ 10V M	CA1A101SP085
C505	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C506	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C507	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C508	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C515	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C531	ELECTROLYTIC CAP. 330μF/ 50V M	CA1J331SP084
C532	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C534	CHIP CERAMIC CAP. B K 1μF/ 16V	CHD1CK30B105
C535	ELECTROLYTIC CAP. 470μF/ 16V M	CA1C471SP085
C537	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C538	ELECTROLYTIC CAP. 10μF/ 50V M	CA1J100SP085
C539	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C601⚠	METALIZED FILM CAP. 0.1μF/ 250V	CT2E104MS037
C602⚠	METALIZED FILM CAP. 0.1μF/ 250V	CT2E104MS037
C605	CERAMIC CAP. F Z 0.01μF/ 500V	CCD2JZP0F103
C606	CERAMIC CAP. F Z 0.01μF/ 500V	CCD2JZP0F103
C608	CERAMIC CAP. B K 1000pF/2KV	CCD3DKP0B102
C610⚠	ELECTROLYTIC CAP. 100μF/ 200V M	CE2DMZPDL101
C612	FILM CAP.(P) 0.01μF/ 50V J	CMA1JJS00103
C613	FILM CAP.(P) 0.056μF/ 50V J	CMA1JJS00563
C614	PCB JUMPER D0.6-P5.0	JW5.0T
C615	PCB JUMPER D0.6-P5.0	JW5.0T
C630⚠	ELECTROLYTIC CAP. 2200μF/ 25V M	CA1E222SP084
C631⚠	ELECTROLYTIC CAP. 2200μF/ 35V M	CA1G222SP084
C633⚠	ELECTROLYTIC CAP. 220μF/ 16V M	CA1C221SP085
C634⚠	ELECTROLYTIC CAP. 1000μF/ 25V M	CA1E102SP084
C635⚠	ELECTROLYTIC CAP. 470μF/ 10V M	CA1A471SP085
C636	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C637⚠	ELECTROLYTIC CAP. 2200μF/ 35V M	CA1G222SP084
C638	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C641⚠	SAFETY CAP. 4700pF/250V KX	CA2E472MR050
C642⚠	ELECTROLYTIC CAP. 10μF/ 50V M	CA1J100SP085
C644⚠	ELECTROLYTIC CAP 100μF/ 50V M	CA1J101SP085
C645⚠	ELECTROLYTIC CAP. 10μF/ 50V M	CA1J100SP085
C646	MYLAR CAP. 0.22μF/ 50V J	CMA1JJS00224
C649	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C650	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C652⚠	ELECTROLYTIC CAP. 1000μF/ 25V M	CA1E102SP084
C654⚠	ELECTROLYTIC CAP. 100μF/ 200V M	CE2DMZPDL101
C657	ALUMINUM ELECTROLYTIC CAP 47μF/ 16V H7	CE1CMASSM470
C659	FILM CAP.(P) 0.022μF/ 50V J	CMA1JJS00223
C660	FILM CAP.(P) 0.0068μF/ 50V J	CMA1JJS00682
C671	ELECTROLYTIC CAP. 470μF/ 10V M	CA1A471SP085
C672	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C673	ELECTROLYTIC CAP. 470μF/ 10V M	CA1A471SP085
C674	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C701	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C702	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C703	ELECTROLYTIC CAP. 47μF/ 16V M	CA1C470SP085
C704	ELECTROLYTIC CAP. 47μF/ 16V M	CA1C470SP085
C705	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C706	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C707	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C708	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C711	ELECTROLYTIC CAP. 47μF/ 16V M	CA1C470SP085

Ref. No.	Description	Part No.
C712	ELECTROLYTIC CAP. 47μF/ 16V M	CA1C470SP085
C713	CHIP CERAMIC CAP.(1608) B K 3300pF/50V	CHD1JK30B332
C714	CHIP CERAMIC CAP. F Z 2.2μF/ 10V	CHD1AZ30F225
C715	CHIP CERAMIC CAP.(1608) B K 3300pF/50V	CHD1JK30B332
C716	CHIP CERAMIC CAP. F Z 2.2μF/ 10V	CHD1AZ30F225
C722	ELECTROLYTIC CAP. 47μF/ 16V M	CA1C470SP085
C726	ELECTROLYTIC CAP. 47μF/ 16V M	CA1C470SP085
C730	ELECTROLYTIC CAP. 47μF/ 16V M	CA1C470SP085
C734	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C735	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C736	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C738	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C739	ELECTROLYTIC CAP. 100μF/ 10V M	CA1A101SP085
C740	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C751	CHIP CERAMIC CAP. F Z 2.2μF/ 10V	CHD1AZ30F225
C752	CHIP CERAMIC CAP. F Z 2.2μF/ 10V	CHD1AZ30F225
C753	CHIP CERAMIC CAP.(1608) B K 3300pF/50V	CHD1JK30B332
C754	CHIP CERAMIC CAP.(1608) B K 3300pF/50V	CHD1JK30B332
C781	ELECTROLYTIC CAP. 10μF/ 50V M	CA1J100SP085
C782	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C784	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C785	ELECTROLYTIC CAP. 100μF/ 10V M	CA1A101SP085
C787	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C801	ELECTROLYTIC CAP. 470μF/ 16V M	CE1CMZPDL471
C802	ELECTROLYTIC CAP. 470μF/ 16V M	CA1C471SP085
C803	FILM CAP.(P) 0.1μF/ 50V J	CMA1JJS00104
C804	FILM CAP.(P) 0.1μF/ 50V J	CMA1JJS00104
C805	ELECTROLYTIC CAP. 10μF/ 50V M	CA1J100SP085
C806	CHIP CERAMIC CAP. F Z 1μF/ 10V	CHD1AZ30F105
C807	CHIP CERAMIC CAP. F Z 1μF/ 10V	CHD1AZ30F105
C809	ELECTROLYTIC CAP. 4.7μF/ 50V M	CA1J4R7SP085
C811	ELECTROLYTIC CAP. 100μF/ 16V M	CA1C101SP085
C812	CHIP CERAMIC CAP. F Z 1μF/ 10V	CHD1AZ30F105
C813	CHIP CERAMIC CAP. F Z 1μF/ 10V	CHD1AZ30F105
C818	ELECTROLYTIC CAP. 2200μF/ 16V M	CA1C222SP084
C819	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C820	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C851	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C852	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C853	ELECTROLYTIC CAP. 2.2μF/ 50V M	CA1J2R2SP085
C854	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C855	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C856	CHIP CERAMIC CAP.(1608) B K 0.33μF/ 10V	CHD1AK30B334
C857	ELECTROLYTIC CAP. 2.2μF/ 50V M	CA1J2R2SP085
C858	ELECTROLYTIC CAP. 2.2μF/ 50V M	CA1J2R2SP085
C859	ELECTROLYTIC CAP. 4.7μF/ 50V M	CA1J4R7SP085
C860	ELECTROLYTIC CAP. 10μF/ 50V M	CA1J100SP085
C861	ELECTROLYTIC CAP. 100μF/ 10V M	CA1A101SP085
C862	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C863	ELECTROLYTIC CAP. 2.2μF/ 50V M	CA1J2R2SP085
C864	CHIP CERAMIC CAP.(1608) B K 0.022μF/ 50V	CHD1JK30B223
C865	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C866	CHIP CERAMIC CAP. F Z 2.2μF/ 10V	CHD1AZ30F225
C867	CHIP CERAMIC CAP. F Z 2.2μF/ 10V	CHD1AZ30F225
C868	CHIP CERAMIC CAP. B K 1μF/ 16V	CHD1CK30B105
C869	CHIP CERAMIC CAP.(1608) B K 0.022μF/ 50V	CHD1JK30B223
CONNECTORS		
CN113	PH CONNECTOR (WHITE) TOP 4P B4B-PH-K-S(LF)	J3PHC04JG017
CN411	PH CONNECTOR TOP 11P B11B-PH-K-S(LF)	J3PHC11JG017
CN801	CONNECTOR BASE 008283021100000S+	J383C02UG003
CN802	CONNECTOR BASE 008283021100000S+	J383C02UG003
CN101A	TWG CONNECTOR 09P TWG-P09P-A1	J3TWA09TG001
CN102A	TWG CONNECTOR 23P TWG-P23P-A1	J3TWA23TG001
CN103A	TWG CONNECTOR 23P TWG-P23P-A1	J3TWA23TG001
DIODES		
D31	SWITCHING DIODE 1SS400	QD1Z001SS400
D501⚠	SWITCHING DIODE 1SS400	QD1Z001SS400
D502	ZENER DIODE MTZJT-7724B	QDTB00MTZJ24
D504⚠	SWITCHING DIODE 1SS400	QD1Z001SS400
D505	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
D506	SWITCHING DIODE 1SS400	QD1Z001SS400
D507	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D510	SWITCHING DIODE 1SS400	QD1Z001SS400
D511	SWITCHING DIODE 1SS400	QD1Z001SS400
D512	SWITCHING DIODE 1SS400	QD1Z001SS400
D513	SWITCHING DIODE 1SS400	QD1Z001SS400
D514	SCHOTTKY BARRIER DIODE ERC81-004	QDPZERC81004
D515	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
D520	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D522	SWITCHING DIODE 1SS400	QD1Z001SS400
D523	SCHOTTKY BARRIER DIODE ERC81-004	QDPZERC81004
D525	ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D526	SWITCHING DIODE 1SS400	QD1Z001SS400
D527	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D535	ZENER DIODE MTZJT-773.9B	QDTB0MTZJ3R9
D605⚠	DIODE 1N5397-B	NDLZ001N5397
D606⚠	DIODE 1N5397-B	NDLZ001N5397
D607⚠	DIODE 1N5397-B	NDLZ001N5397
D608⚠	DIODE 1N5397-B	NDLZ001N5397
D609	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D611⚠	ZENER DIODE MTZJT-7722B	QDTB00MTZJ22
D612	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D613	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D615	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D616⚠	ZENER DIODE MTZJT-7733B	QDTB00MTZJ33
D620	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D624⚠	ZENER DIODE MTZJT-7733B	QDTB00MTZJ33
D630⚠	SCHOTTKY BARRIER DIODE ERC84-009	QDLZERC84009
D631⚠	DIODE FR154	NDLZ000FR154
D633⚠	SCHOTTKY BARRIER DIODE ERC81-004	QDPZERC81004
D634	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D636	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D638	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D639⚠	SCHOTTKY BARRIER DIODE ERC81-004	QDPZERC81004
D640⚠	DIODE FR104-B	NDLZ000FR104
D641⚠	ZENER DIODE MTZJT-7733C	QDTC00MTZJ33
D642	SWITCHING DIODE 1SS400	QD1Z001SS400
D643	SWITCHING DIODE 1SS400	QD1Z001SS400
D644⚠	SWITCHING DIODE 1SS400	QD1Z001SS400
D645⚠	DIODE FR154	NDLZ000FR154
D646⚠	DIODE 1ZC43(Q)	QDLZ001ZC43Q
D647⚠	ZENER DIODE MTZJT-7739B	QDTB00MTZJ39
D648⚠	SWITCHING DIODE 1SS400	QD1Z001SS400
D649⚠	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
D650	SWITCHING DIODE 1SS400	QD1Z001SS400
D651	SWITCHING DIODE 1SS400	QD1Z001SS400
D652	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D653	SWITCHING DIODE 1SS400	QD1Z001SS400
D655⚠	SCHOTTKY BARRIER DIODE YG861S12RSC	QDQZYG861S12
D658	PCB JUMPER D0.6-P5.0	JW5.0T
D659	PCB JUMPER D0.6-P5.0	JW5.0T
D668	SWITCHING DIODE 1SS400	QD1Z001SS400
D672	SWITCHING DIODE 1SS400	QD1Z001SS400
D681	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133

Ref. No.	Description	Part No.
D682	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D701	ZENER DIODE MTZJT-778.2B	QDTB0MTZJ8R2
D702	ZENER DIODE MTZJT-778.2B	QDTB0MTZJ8R2
D703	ZENER DIODE MTZJT-778.2B	QDTB0MTZJ8R2
D801	SWITCHING DIODE 1SS400	QD1Z001SS400
D802	SWITCHING DIODE 1SS400	QD1Z001SS400
D803	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D810	ZENER DIODE MTZJT-773.3B	QDTB0MTZJ3R3
ICS		
IC31	IC VIF/SIF M61116FP TF0G	QSZBA0SHT034
IC531⚠	IC REGULATOR KA78R08C	NSZBA0SF3119
IC533	IC NJM78L05	QSBLA0ZJR034
IC601⚠	PHOTOCOUPLER LTV-817C-F	NPEC0LTV817F
IC671	IC VOLTAGE REGULATOR 5V KIA7805API/P	NSZBA0SJY041
IC672	IC VOLTAGE REGULATOR 5V KIA7805API/P	NSZBA0SJY041
IC781	IC SWITCH TC4053BF(EL N F)	QSZBA0TTS163
IC801	IC AN17812A	QSZBA0SMS017
IC851	IC MTS DECORDER AN5832SA-E1V	QSZBA0TMS003
IC852	IC SWITCHING TC4052BF(ELNF)	QSZBA0TTS162
COILS		
L11	INDUCTOR 22μH-K-5FT	LLARKBSTU220
L12	PCB JUMPER D0.6-P5.0	JW5.0T
L21	INDUCTOR 100μH-K-5FT	LLARKBSTU101
L22	INDUCTOR 150μH-J-26T	LLAXJATTU151
L31	INDUCTOR 22μH-K-5FT	LLARKBSTU220
L32	INDUCTOR 18μH-J-26T	LLAXJATTU180
L601⚠	LINE FILTER TLF14CB3321R0	LLBG00ZTU012
L602⚠	LINE FILTER TLF14CB3321R0	LLBG00ZTU012
L701	INDUCTOR 22μH-K-5FT	LLARKBSTU220
L781	PCB JUMPER D0.6-P5.0	JW5.0T
L851	INDUCTOR 47μH-K-5FT	LLARKBSTU470
TRANSISTORS		
Q32	TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q501	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q502	TRANSISTOR 2SA1576A T106R	QQ1R2SA1576A
Q503	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q505	TRANSISTOR KTD2059-O/P	NQE0KTD2059P
Q509	TRANSISTOR 2SA1576A T106R	QQ1R2SA1576A
Q510	TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q511	RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q512	TRANSISTOR 2SC2120-O(TE2 F T)	QQS02SC2120F
Q513	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q531	TRANSISTOR 2SC2120-O(TE2 F T)	QQS02SC2120F
Q601⚠	FET 2SK3869(Q)	QFWZ2SK3869Q
Q603⚠	TRANSISTOR 2SC2120-O(TE2 F T)	QQS02SC2120F
Q633	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q701	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q702	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q703	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q704	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q705	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q706	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q707	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q708	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q802	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q803	TRANSISTOR 2SA1175(F)	QQSF02SA1175
RESISTORS		
R11	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R12	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R13	INDUCTOR 0.47μH-J-26T	LLAXJATTUR47
R15	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R21	CHIP RES. 1/10W J 270k Ω	RRXAJR5Z0274

Ref. No.	Description	Part No.
R23	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R24	CHIP RES. 1/10W J 820k Ω	RRXAJR5Z0824
R34	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R36	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R38	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R40	CHIP RES. 1/10W J 15k Ω	RRXAJR5Z0153
R42	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R46	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R48	PCB JUMPER D0.6-P5.0	JW5.0T
R49	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R50	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R52	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R501	CHIP RES. 1/10W F 6.8k Ω	RRXAFR5H6801
R502	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R503	CHIP RES. 1/10W F 1.6k Ω	RRXAFR5H1601
R504	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R505	CHIP RES. 1/10W J 2.7k Ω	RRXAJR5Z0272
R506	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R508	MRTAL OXIDE FILM RES. 1W J 4.7k Ω	RN01472KE010
R510	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R512	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R514	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R515	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R516	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R517	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R518	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R519	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R520	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R521	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R522	CHIP RES. 1/10W J 120k Ω	RRXAJR5Z0124
R527	CHIP RES. 1/10W J 3.9k Ω	RRXAJR5Z0392
R528	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R529	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R530	METAL OXIDE FILM RES. 2W J 4.7 Ω	RN024R7KE010
R531	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R532	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R533	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R534	METAL OXIDE FILM RES. RSI-1S101JHB54	RN01101KE010
R535	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R536	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R537	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R538	PCB JUMPER D0.6-P5.0	JW5.0T
R540	PCB JUMPER D0.6-P5.0	JW5.0T
R552	FIXED METAL OXIDE FILM RE S. 1W J 1 Ω	RN011R0KE010
R601⚠	CEMENT RES. 3W K 1.2 Ω	RW031R2PG007
R603	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R604	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R605	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R606	PCB JUMPER D0.6-P5.0	JW5.0T
R607	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R608	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R609	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R610	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R613⚠	METAL OXIDE FILM RES. 2W J 0.47 Ω	RN02R47KE010
R620	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R621	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R622	PCB JUMPER D0.6-P5.0	JW5.0T
R623	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R633	CHIP RES. 1/10W J 27k Ω	RRXAJR5Z0273
R634⚠	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R635⚠	CHIP RES. 1/10W J 27k Ω	RRXAJR5Z0273
R636	PCB JUMPER D0.6-P5.0	JW5.0T
R637⚠	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222

Ref. No.	Description	Part No.
R638	METAL OXIDE FILM RES. 2W J 1k Ω	RN02102KE010
R642⚠	CHIP RES. 1/10W J 27k Ω	RRXAJR5Z0273
R645	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R646	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R647	CHIP RES. 1/10W F 1.8k Ω	RRXAFR5H1801
R648⚠	CHIP RES. 1/10W F 750 Ω	RRXAFR5H7500
R650⚠	CHIP RES. 1/10W F 4.7k Ω	RRXAFR5H4701
R652⚠	CHIP RES. 1/10W F 2.7k Ω	RRXAFR5H2701
R653⚠	CHIP RES. 1/10W F 2.7k Ω	RRXAFR5H2701
R654⚠	CHIP RES. 1/10W F 820 Ω	RRXAFR5H8200
R655	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R656	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R657	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R658	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R661⚠	CHIP RES. 1/10W F 4.3k Ω	RRXAFR5H4301
R664	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R665⚠	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R666⚠	CHIP RES. 1/10W F 3.6k Ω	RRXAFR5H3601
R671	PCB JUMPER D0.6-P5.0	JW5.0T
R672	PCB JUMPER D0.6-P5.0	JW5.0T
R701	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R702	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R703	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R704	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R705	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R706	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R707	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R708	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R709	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R710	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R711	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R712	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R713	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R714	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R715	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R716	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R717	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R718	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R719	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R720	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R721	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R722	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R725	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R732	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R733	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R734	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R735	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R736	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R738	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R739	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R740	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R741	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R742	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R743	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R744	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R747	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R748	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R749	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R752	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R755	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R756	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R757	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R758	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473

Ref. No.	Description	Part No.
R759	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R782	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R784	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R785	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R786	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R787	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R788	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R789	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R790	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R791	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R792	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R793	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R794	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R798	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R799	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R801	CARBON RES. 1/2W J 100 Ω	RCX2JZQZ0101
R802	CARBON RES. 1/2W J 100 Ω	RCX2JZQZ0101
R803	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R804	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R805⚠	METAL OXIDE FILM RES. 2W J 2.2 Ω	RN022R2KE010
R806	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R807⚠	METAL OXIDE FILM RES. 2W J 2.2 Ω	RN022R2KE010
R808	CHIP RES. 1/10W J 56k Ω	RRXAJR5Z0563
R809	CHIP RES. 1/10W J 150k Ω	RRXAJR5Z0154
R810	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R811	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R813	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R814	CHIP RES. 1/10W J 2.7k Ω	RRXAJR5Z0272
R816	CHIP RES. 1/10W J 2.7k Ω	RRXAJR5Z0272
R817	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R820	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R821	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R822	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R823	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R824	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R825	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R826	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R827	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R829	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R830	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R831	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R832	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R833	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R834	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R835	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R836	CHIP RES. 1/10W J 330 Ω	RRXAJR5Z0331
R837	CHIP RES. 1/10W J 12k Ω	RRXAJR5Z0123
R838	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R839	CHIP RES. 1/10W J 12k Ω	RRXAJR5Z0123
R842	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R843	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R844	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R851	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R852	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R853	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R855	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
	MISELLANEOUS	
AC601⚠	AC CORD LP-11W&PT218P-K90A&S	WAC0172LW020
B6	POW HEAT SINK PKG ASSEMBLY L3201UB	1EM420650
B7	SHIELD BOX TOP L3201UB	1EM320159
B10	HEAT SINK PKH ASSEMBLY L3201UB	1EM420648
BC401	PCB JUMPER D0.6-P5.0	JW5.0T

Ref. No.	Description	Part No.
BC602	BEADS INDUCTOR FBR07HA121SB-00	LLBF00STU030
BC630	BEADS INDUCTOR FBR07HA121SB-00	LLBF00STU030
BC631	BEADS INDUCTOR FBR07HA121SB-00	LLBF00STU030
BC632	PCB JUMPER D0.6-P5.0	JW5.0T
BC634	PCB JUMPER D0.6-P5.0	JW5.0T
BC635	PCB JUMPER D0.6-P5.0	JW5.0T
BC636	BEADS INDUCTOR FBR07HA121SB-00	LLBF00STU030
CF31	CERAMIC FILTER SFSRA4M50CF00-B0	FBB455PMR004
F601⚠	FUSE STC4A125V U/CT	PAGE20CW3402
FH601	FUSE HOLDER MSF-015	XH01Z00LY001
FH602	FUSE HOLDER MSF-015	XH01Z00LY001
GP641⚠	GAP. FNR-G3.10D	FAZ000LD6005
JK701	Y/C JACK 1P(SW) DMDC1-01-021	JYEL040RP001
JK703	JACK RCA PCB L RCA-112(2)-04(YL)	JXRL010YUQ10
JK704	JACK RCA PCB L RCA-112(2)-04(WH)	JXRL010YUQ11
JK705	JACK SW RCA PCB L RCA-112-03(RD)	JYRL010YUQ02
JK706	RCA JACK(GREEN) MTJ-032-08B-41 FE	JXRL010LY126
JK707	RCA JACK(BLUE) MTJ-032-08B-44 FE	JXRL010LY130
JK708	RCA JACK(RED) (PB FREE) MTJ-032-08A-29 FE	JXRL010LY114
JK709	JACK RCA PCB L RCA-112(2)-04(WH)	JXRL010YUQ11
JK710	JACK SW RCA PCB L RCA-112-03(RD)	JYRL010YUQ02
JK801	HEADPHONE JACK MSJ-035-10A B	JYSL020LY002
JS524	PCB JUMPER D0.6-P5.0	JW5.0T
JS631	PCB JUMPER D0.6-P5.0	JW5.0T
JS634	PCB JUMPER D0.6-P5.0	JW5.0T
JS636	PCB JUMPER D0.6-P5.0	JW5.0T
JS805	PCB JUMPER D0.6-P5.0	JW5.0T
JS806	PCB JUMPER D0.6-P5.0	JW5.0T
JS813	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L4	SCREW B-TIGHT D3X8 BIND HEAD+	GBMB3080
SA601⚠	SURGE ABSORBER 470V+-10PER	NVQZ10D471KB
SF11	SAW FILTER SAFHM45M7VAJZ01B03	FBB456PMR012
T601⚠	SWITCHING TRANS 5723	LTT00CPKT182
TP401	PCB JUMPER D0.6-P20.0	JW20.0T
TU1	TUNER UNIT TEFH9-002A	UTUNNTUAL045

ANALOG INVERTER ASSEMBLY

Ref. No.	Description	Part No.
	ANALOG INVERTER ASSEMBLY Consists of the following:	1ESA10861
	INVERTER CBA FUNCTION CBA IR SENSOR CBA	---------- ---------- ----------

INVERTER CBA

Ref. No.	Description	Part No.
	INVERTER CBA Consists of the following:	----------
	CAPACITORS	
C401	ELECTROLYTIC CAP. 47μF/ 35V M	CA1G470SP085
C402	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C403	ELECTROLYTIC CAP. 100μF/ 16V M	CA1C101SP085
C404	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C405	CHIP CERAMIC CAP.(1608) B K 0.047μF/ 50V	CHD1JK30B473
C406	CHIP CERAMIC CAP. CH J 220pF/50V	CHD1JJ3CH221
C407	CHIP CERAMIC CAP.(1608) B K 6800pF/50V	CHD1JK30B682
C408	CHIP CERAMIC CAP.(1608) B K 4700pF/50V	CHD1JK30B472
C409	CHIP CERAMIC CAP.(1608) B K 6800pF/50V	CHD1JK30B682
C410	CHIP CERAMIC CAP.(1608) B K 4700pF/50V	CHD1JK30B472
C412	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C413	ELECTROLYTIC CAP. 0.22μF/ 50V M	CA1JR22SP085
C414	ELECTROLYTIC CAP. 2.2μF/ 50V M	CA1J2R2SP085
C415	ELECTROLYTIC CAP. 2.2μF/ 50V M	CA1J2R2SP085
C416	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C420	ELECTROLYTIC CAP. 47μF/ 35V M	CA1G470SP096
C422	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C423	ELECTROLYTIC CAP. 47μF/ 35V M	CA1G470SP096
C425	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C426	ELECTROLYTIC CAP. 47μF/ 35V M	CA1G470SP096
C428	CHIP CERAMIC CAP.(1608) B K 0.1μF/ 50V	CHD1JK30B104
C429	CHIP CERAMIC CAP. B K 4.7μF/ 25V	CHF1EK30B475
C430	CHIP CERAMIC CAP. B K 4.7μF/ 25V	CHF1EK30B475
C431	CHIP CERAMIC CAP. B K 4.7μF/ 25V	CHF1EK30B475
C432	CHIP CERAMIC CAP. B K 4.7μF/ 25V	CHF1EK30B475
C433	CHIP CERAMIC CAP. B K 4.7μF/ 25V	CHF1EK30B475
C434	CHIP CERAMIC CAP. B K 4.7μF/ 25V	CHF1EK30B475
C440	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C441	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C442	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C450	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C451	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C452⚠	CERAMIC CAP. SL D 10pF/3KV	CCD3FDASL100
C453	CHIP CERAMIC CAP.(1608) B K 0.022μF/ 50V	CHD1JK30B223
C454⚠	CERAMIC CAP. SL D 10pF/3KV	CCD3FDASL100
C455	CHIP CERAMIC CAP.(1608) B K 0.022μF/ 50V	CHD1JK30B223
C460	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C462⚠	CERAMIC CAP. SL D 10pF/3KV	CCD3FDASL100
C463	CHIP CERAMIC CAP.(1608) B K 0.022μF/ 50V	CHD1JK30B223
C464⚠	CERAMIC CAP. SL D 10pF/3KV	CCD3FDASL100
C465	CHIP CERAMIC CAP.(1608) B K 0.022μF/ 50V	CHD1JK30B223
C490	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C492⚠	CERAMIC CAP. SL D 10pF/3KV	CCD3FDASL100
C493	CHIP CERAMIC CAP.(1608) B K 0.022μF/ 50V	CHD1JK30B223
C494⚠	CERAMIC CAP. SL D 10pF/3KV	CCD3FDASL100
C495	CHIP CERAMIC CAP.(1608) B K 0.022μF/ 50V	CHD1JK30B223
C496	ELECTROLYTIC CAP. 470μF/ 35V M	CA1G471SP084
C1401	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C1403	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C1404	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
C1409	CHIP CERAMIC CAP.(1608) B K 0.22μF/ 25V	CHD1EK30B224
	CONNECTORS	
CN450	BACK LIGHT CONNECTOR 1717369-1	JB17D02AP001
CN460	BACK LIGHT CONNECTOR 1717369-1	JB17D02AP001
CN490	BACK LIGHT CONNECTOR 1717369-1	JB17D02AP001
	DODES	
D401	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D402	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D403	ZENER DIODE MTZJT-7715B	QDTB00MTZJ15
D404	ZENER DIODE MTZJT-7715B	QDTB00MTZJ15
D405	ZENER DIODE MTZJT-7715B	QDTB00MTZJ15
D411	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D420	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D421	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D422	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D425	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D426	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D427	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D430	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D431	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D432	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D450	SWITCHING DIODE 1SS400	QD1Z001SS400
D451	SWITCHING DIODE 1SS400	QD1Z001SS400
D452	SWITCHING DIODE 1SS400	QD1Z001SS400

Ref. No.	Description	Part No.
D453	SWITCHING DIODE 1SS400	QD1Z001SS400
D454	SWITCHING DIODE 1SS400	QD1Z001SS400
D455	SWITCHING DIODE 1SS400	QD1Z001SS400
D456	SWITCHING DIODE 1SS400	QD1Z001SS400
D457	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D460	SWITCHING DIODE 1SS400	QD1Z001SS400
D461	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D464	SWITCHING DIODE 1SS400	QD1Z001SS400
D465	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D466	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D467	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D472	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D473	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D490	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D491	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D492	SWITCHING DIODE 1SS400	QD1Z001SS400
D493	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D494	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D495	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D496	SWITCHING DIODE 1SS400	QD1Z001SS400
D497	SWITCHING DIODE 1SS400	QD1Z001SS400
	ICS	
IC401	IC BD9766FV-E2	QSZBA0TRM062
IC402	IC BA10324AF-E2	QSZBA0TRM032
	TRANSISTORS	
Q403	TRANSISTOR 2SC2120-O(TE2 F T)	QQS02SC2120F
Q411⚠	TRANSISTOR KTC3205-Y-AT/P	NQSYKTC3205P
Q412	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q421⚠	FET TPC8405(TE12 L Q)	QF2ZTPC8405Q
Q426⚠	FET TPC8405(TE12 L Q)	QF2ZTPC8405Q
Q433⚠	FET TPC8405(TE12 L Q)	QF2ZTPC8405Q
Q451	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q452	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q454	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q455	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q461	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q462	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q491	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q492	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
	RESISTORS	
R402	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R404	CHIP RES. 1/10W J 5.1k Ω	RRXAJR5Z0512
R405	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R406	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R407	METAL RESISITOR 2W J 2.2k Ω	RN02222ZU001
R408	METAL RESISITOR 2W J 2.2k Ω	RN02222ZU001
R409	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R411	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R412	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R413	CHIP RES. 1/10W J 68k Ω	RRXAJR5Z0683
R414	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R415	CHIP RES. 1/10W F 2k Ω	RRXAFR5H2001
R416	CHIP RES. 1/10W F 30k Ω	RRXAFR5H3002
R417	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R419	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R420	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R421	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R422	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R423	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R424	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R425	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R426	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221

Ref. No.	Description	Part No.
R427	CHIP RES. 1/10W J 15k Ω	RRXAJR5Z0153
R430	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R432	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R435	PCB JUMPER D0.6-P5.0	JW5.0T
R437	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R438	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R440	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R442	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R443	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R450	CHIP RES. 1/10W F 620 Ω	RRXAFR5H6200
R451	CHIP RES.(1608) 1/10W F 15 Ω	RRXAFR5H15R0
R452	CHIP RES. 1/10W F 620 Ω	RRXAFR5H6200
R453	CHIP RES.(1608) 1/10W F 15 Ω	RRXAFR5H15R0
R454	CHIP RES. 1/10W F 1.0k Ω	RRXAFR5H1001
R456	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R457	CHIP RES. 1/10W J 680k Ω	RRXAJR5Z0684
R458	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R459	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R460	CHIP RES. 1/10W F 620 Ω	RRXAFR5H6200
R461	CHIP RES.(1608) 1/10W F 15 Ω	RRXAFR5H15R0
R466	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R467	CHIP RES. 1/10W J 680k Ω	RRXAJR5Z0684
R468	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R469	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R472	CHIP RES.(1608) 1/10W F 47.0 Ω	RRXAFR5H47R0
R473	CHIP RES. 1/10W F 270 Ω	RRXAFR5H2700
R476	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R477	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R478	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R479	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R480	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R481	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R482	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R483	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R485	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R486	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R487	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R488	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R490	CHIP RES. 1/10W F 620 Ω	RRXAFR5H6200
R491	CHIP RES.(1608) 1/10W F 15 Ω	RRXAFR5H15R0
R492	CHIP RES.(1608) 1/10W F 47.0 Ω	RRXAFR5H47R0
R493	CHIP RES. 1/10W F 270 Ω	RRXAFR5H2700
R495⚠	CHIP RES. 1/10W J 1 Ω	RRXAJR5Z01R0
R1406	CHIP RES. 1/10W F 2k Ω	RRXAFR5H2001
	MISCELLANEOUS	
CLN411	11P WIRE ASSEMBLY WX1L3200-003	WX1L3200-003
RL401	POWER RELAY SDT-S-112LMR	MRNDC12QN014
T450⚠	INVERTER TRANS ETJV25ZB12AC	LTZ00CPMS004
T460⚠	INVERTER TRANS ETJV25ZB12AC	LTZ00CPMS004
T490⚠	INVERTER TRANS ETJV25ZB12AC	LTZ00CPMS004

FUNCTION CBA

Ref. No.	Description	Part No.
	FUNCTION CBA Consists of the following:	---------
	CAPACITOR	
C61	CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
	RESISTORS	
R61	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R62	CHIP RES. 1/10W J 47 Ω	RRXAJR5Z0470
R63	CHIP RES. 1/10W J 1.5k Ω	RRXAJR5Z0152
R64	CHIP RES. 1/10W J 1.5k Ω	RRXAJR5Z0152

Ref. No.	Description	Part No.
R65	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R66	CHIP RES. 1/10W J 2.7k Ω	RRXAJR5Z0272
R67	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R68	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R69	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R70	CHIP RES. 1/10W J 47 Ω	RRXAJR5Z0470
SWITCHES		
SW61	TACT SWITCH SKQSAB	SST0101AL038
SW62	TACT SWITCH SKQSAB	SST0101AL038
SW63	TACT SWITCH SKQSAB	SST0101AL038
SW64	TACT SWITCH SKQSAB	SST0101AL038
SW65	TACT SWITCH SKQSAB	SST0101AL038
SW67	TACT SWITCH SKQSAB	SST0101AL038
SW71	TACT SWITCH SKQSAB	SST0101AL038
MISCELLANEOUS		
CLN104	5P-8P WIRE ASSEMBLY 5P-8P WIRE ASSEMBLY	WX1L3201-006
JS62	PCB JUMPER D0.6-P5.0	JW5.0T
JS63	PCB JUMPER D0.6-P5.0	JW5.0T

IR SENSOR CBA

Ref. No.	Description	Part No.
	IR SENSOR CBA Consists of the following:	----------
CAPACITOR		
C91	ELECTROLYTIC CAP. 47μF/ 10V M H7	CE1AMASSL470
DIODE		
D91	LED L-53HT	NP4Z000L53HT
TRANSISTOR		
Q91	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
RESISTOSRS		
R91	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R92	CHIP RES. 1/10W J 68 Ω	RRXAJR5Z0680
R93	CARBON RES. 1/4W J 68 Ω	RCX4JATZ0680
R94	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R95	CHIP RES. 1/10W J 150 Ω	RRXAJR5Z0151
R96	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
MISCELLANEOUS		
CLN105	5P WIRE ASSEMBLY 5P WIRE ASSEMBLY	WX1L3201-004
JS91	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
JS93	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
JS94	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
RCV91	PHOTO LINK MODULE KSM-712TH2E	USESJRSKK044